中國海外宏洋集團有限公司
CHINA OVERSEAS GRAND OCEANS GROUP LTD.

CHINA OVERSEAS GRAND OCEANS GROUP LTD.

WHITE PAPER ON CARBON NEUTRALITY

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CHAIRMAN'S STATEMENT

Achieving carbon peaking and carbon neutrality is not only a solemn commitment made by the General Secretary on behalf of China to the world, but also an inherent requirement for promoting China's high-quality development. COGO fully recognizes that promoting the low-carbon and healthy development of the real estate industry is the very concrete embodiment of satisfying the requirements proposed by the 20th National Congress of "pursuing green development and promoting harmony between humanity and nature; accelerating the green transformation of the development mode, and actively and steadily advancing towards carbon peaking and carbon neutrality", and is also the only way to achieve sustainable development of the real estate industry. As an enterprise with a strong sense of political responsibility and historical mission, COGO is willing to consciously shoulder the responsibility of implementing the national "carbon peaking and carbon neutrality" strategy, and unswervingly develop in an ecology-first, green and low-carbon manner.

As a leading player practicing green and low-carbon building projects in the industry, COGO has accumulated a number of core technologies concerning ultra-low energy buildings, and endeavors to create a comfortable, sustainable and high-quality life for customers. We practiced low-carbon development and took the initiative to incorporate carbon peaking and carbon neutrality into the Company's overall development this year, and make a commitment to achieve carbon peaking within the Company's operating boundaries by 2029 and carbon neutrality by 2049. According to the carbon inventory of 89 projects of COGO, we found that carbon emissions in the operation stage of buildings, the production and transportation stage of building materials, and the construction stage accounted for 70%, 26% and 4% respectively of the carbon emissions of the whole life cycle. Therefore, based on our operation actuality, we are committed to promoting low-carbon development of the industry from three dimensions: building operation, building materials and construction. This China Overseas Grand Oceans Group Ltd. White Paper on Carbon Neutrality, our first white paper on carbon neutrality, will be a good start for us to scientifically plan to attain carbon neutrality.

On the one hand, COGO starts from strengthening its own carbon management, continues to explore a low-carbon and healthy development path, creates a model of the Company's low-carbon management, and is committed to creating a good atmosphere for low-carbon office and green life for employees. We conducted a comprehensive inventory of the carbon emissions within the Company's operating boundaries in 2021, which laid a solid foundation for us to join in zero-carbon development and formulate energy-saving and emission-reduction strategies. After an in-depth analysis of the energy-saving and emission-reduction potential in our own operations, we focus on planning a specific path to achieve carbon neutrality of COGO, and attain the "carbon peaking and carbon neutrality" goals through measures including energy saving and efficiency improvement in office space, increasing the utilization proportion of clean energy, and encouraging low-carbon behaviors among employees.

On the other hand, COGO continues to promote the low-carbon and healthy development of the industry, and strives to build our projects into industry benchmarks in terms of ultra-low energy buildings, near-zero energy buildings, and zero energy buildings. We take the lead in practicing low-carbon management throughout the life cycle of buildings, and continue to promote carbon emission reduction throughout the life cycle of buildings by continuously reducing embodied carbon of the buildings, actively implementing green construction, efficient and intelligent operation and maintenance, and scientific management of demolition of abandoned buildings. We attach great importance to the R&D and project implementation practice of zero-carbon technologies, and carry out research on low-carbon building solutions for different climate zones in major R&D bases, aiming to strengthen scientific and technological leadership, make innovative breakthroughs, and explore the low-carbon and healthy development path of the real estate industry. Further, COGO looks forward to working with industry partners to create a new era of low-carbon and healthy residence, build low-carbon solutions for the entire real estate industry chain, and promote value chain stakeholders towards a more sustainable future.

COGO takes carbon neutrality as an opportunity to fully integrate the concept of sustainable development into the Company's strategic planning, value innovation and cultural construction. We aspire to become a pioneer in low-carbon buildings which practices the concept of green, low-carbon and better life, through firmly promoting the low-carbon transformation of the whole real estate value chain and bravely taking the path of low-carbon development. Let's keep up with the pace of the times, strive for excellence, and make COGO's own contribution to the sustainable and healthy development of the industry.

Zhuang Yong

Chairman and executive director

OUR CARBON NEUTRALITY GOAL

By 2029, the Company will achieve **carbon peaking** within the operational boundaries, realize comprehensive electrification, and stop using fossil fuels. By 2049, the Company will fully secure 100% renewable energy utilization, and achieve **carbon neutrality within the operational boundaries.**

2029

The Company will achieve **carbon peaking** within the operational boundaries, realize comprehensive electrification, and stop using fossil fuels

2049

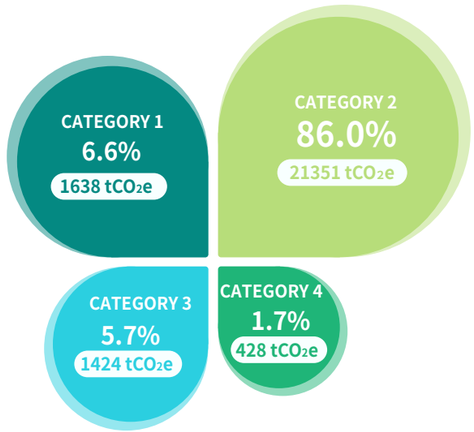
The Company will fully secure renewable energy utilization

100%

And achieve carbon neutrality within the operational boundaries.

CARBON EMISSIONS IN THE BASE YEAR

In accordance with the International Standard ISO 14064-1:2018, we made a comprehensive inventory of the Company's carbon emissions within the operational boundaries in 2021, which indicated that our total greenhouse gas (GHG) emissions were 24,840 tCO_2e, of which:



Total Greenhouse Gas Emissions

24840 tco_2e

The Category 1 GHG emissions were 1,637.94 tCO_2e, accounting for 6.6%;

The Category 2 GHG emissions were 21,350.66 tCO_2e, accounting for 86.0%;

The Category 3 GHG emissions were 1,423.65 tCO_2e, accounting for 5.7%; and

The Category 4 GHG emissions were 427.58 tCO_2e, accounting for 1.7%.

CREATE A MODEL OF THE COMPANY'S LOW-CARBON MANAGEMENT

We plan to reduce carbon emissions at the operational level by energy saving and carbon reduction actions as priority, which will be achieved mainly by:

1

SAVING ENERGY AND IMPROVING EFFICIENCY IN OFFICE SPACE

- improving the energy efficiency management level of office space;
- strengthening the application of high-efficiency and energy-conservation equipment;
- promoting a smart operation and maintenance platform based on BIM technology.

2

INCREASING THE UTILIZATION PROPORTION OF CLEAN ENERGY

- accelerating the electrification of vehicles;
- gradually implementing the construction of fully electric canteens;
- orderly development of distributed photovoltaics;
- active purchase of green electricity.

3

ENCOURAGING LOW-CARBON BEHAVIORS AMONG EMPLOYEES

- promoting paperless office;
- encouraging low-carbon business travel;
- advocating green online meetings;
- exploring the incentive mechanism of carbon credits for employees.

COMPREHENSIVELY STRENGTHEN THE IMPLEMENTATION SAFEGUARD IN CARBON PEAKING AND CARBON NEUTRALITY

BUILDING GOVERNANCE FRAMEWORK FOR CARBON PEAKING AND CARBON NEUTRALITY

At the group level, COGO attaches great importance to the work concerning, and has established a governance framework composing from top-down, Board of Directors of the Company, Executive Committee, ESG Leading Group and ESG Working Group, for, carbon peaking and carbon neutrality.

IMPROVING THE OVERALL COORDINATION MECHANISM

As the main responsible department of energy management, the Human Resources and Administration Department plans green and low-carbon activities, and sets up a well-functioned information feedback mechanism within the Group to ensure that all departments implement low-carbon measures in the process of production and operation.

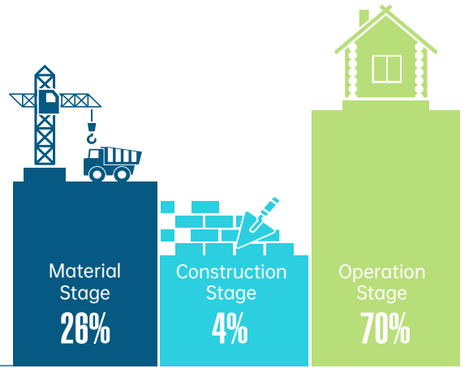
ACCELERATING THE TRAINING OF TALENT TEAM

We will regularly train full-time managers on carbon emission management knowledge and skills, and focus on cultivating scientific research talents in the field of green and low-carbon development.

EMISSION REDUCTION TARGETS IN THE WHOLE LIFE CYCLE OF THE BUILDING

After the carbon inventory of 89 projects of COGO, we found that carbon emissions in the operation stage of buildings, the production and transportation stage of building materials, and the construction stage account for 70%, 26% and 4% respectively of the carbon emissions of the whole life cycle. Therefore, based on our operation actuality, we are committed to promoting the low-carbon development of the industry from three dimensions: building operation, building materials, and construction.

For projects developed by COGO, the accounting system and data management of the carbon emissions of the whole life cycle of the buildings will be comprehensively improved by 2029, and there will be a **50%** increase in the implementation ratio of ultra-low energy buildings, near-zero energy buildings, and zero energy buildings, a **60%** reduction in carbon emission intensity compared with the base year, and a significant emission reduction in the whole life cycle of the buildings by 2049.



CARBON EMISSIONS OF PROJECTS DEVELOPED BY COGO

According to the National Standard GB/T 51366-2019, we carried out an inventory and analysis of the carbon emissions of the whole life cycle of buildings developed in the past three years, the results of which showed a total carbon emissions of 30.08 million tCO_2e, and a carbon emission intensity of 1,697$kgCO_2/m^2$, in the whole life cycle of the sample projects.

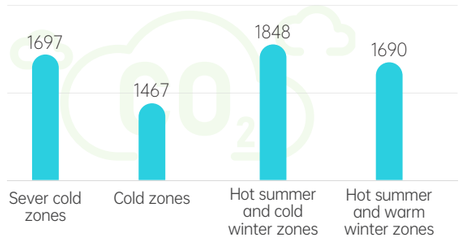
Total carbon emissions

30.08 million tCO2e

Carbon emission intensity

1697 $kgCO_2/m^2$

Among them, the average carbon emission intensity of severe cold zones, cold zones, hot summer and cold winter zones, and hot summer and warm winter zones was 1,697 $kgCO_2/m^2$, 1,467 $kgCO_2/m^2$, 1,848 $kgCO_2/m^2$ and 1,690 $kgCO_2/m^2$, respectively.



Average carbon emission intensity（$kgCO_2/m^2$）

LEAD THE LOW-CARBON AND HEALTHY DEVELOPMENT OF THE INDUSTRY

As a pioneer in fulfilling low carbon management throughout the whole life cycle of buildings in the industry, COGO has kept tapping the emission reduction potential of various key processes throughout the whole life cycle of buildings, to lead the low-carbon and healthy development of the real estate industry.

CONTINUOUSLY REDUCING THE EMBODIED CARBON OF BUILDINGS

- Giving priority to green building materials
- Reducing the use of high-carbon building materials
- Strengthening the recycling of building materials
- Promoting the green transportation of building materials

ACTIVELY IMPLEMENTING GREEN CONSTRUCTION

- Actively promoting prefabricated buildings
- Scientifically formulating low-carbon construction plans
- Vigorously promoting energy-saving construction equipment
- Introducing digital technologies such as BIM and IoT

EFFICIENT AND INTELLIGENT OPERATION AND MAINTENANCE

- Energy saving, quality improvement and efficiency enhancement, as well as reduction of the overall energy consumption level of the building
- Optimizing the energy consumption structure and carrying out pilot "PEDF" projects in buildings
- Promoting digital twin technologies to realize intelligent operation and maintenance of buildings

SCIENTIFIC MANAGEMENT OF DEMOLITION OF ABANDONED BUILDINGS

- Improving the management system of demolition of abandoned buildings
- Scientifically formulating building demolition plans
- Resourceful disposal of construction waste
- Strengthening R&D on building materials reuse technologies

PROMOTE LOW-CARBON TRANSFORMATION OF SUPPLY CHAIN

We look forward to working with industry partners to create a new era of low-carbon and healthy residence, and jointly explore low-carbon transformation solutions for the entire real estate industry chain.

01

FORMULATING GREEN AND LOW-CARBON EVALUATION STANDARDS FOR SUPPLIERS

- Gradually raising the entry threshold for low-carbon suppliers;
- Improving the green and low-carbon evaluation standards for suppliers;
- Prioritizing suppliers with climate action.

02

STRENGTHENING COOPERATION AMONG ALLIED BUSINESS PARTNERS

- Strengthening exchanges and cooperation on climate change and sharing industry practical experience;
- Establishing a "Zero-Carbon Building Alliance" with upstream and downstream enterprises in the supply chain.

03

LEVERAGING GREEN FINANCE TO AID THE ZERO-CARBON TRANSFORMATION OF THE CONSTRUCTION INDUSTRY

- Making full use of green credit such as green building development loans and green commercial housing loans;
- Exploring the issuance of carbon neutrality CMBS, green bonds and other green financing backed instruments;
- Actively playing the role of green fund products such as ESG fund and green development fund;
- Carrying out innovation and development of green building supply chain financial services.

01

On the Path to Carbon Neutrality

China Overseas Holdings Limited is a flagship subsidiary of China State Construction Engineering Corporation which ranked ninth out of Global 500 in 2022. China Overseas Grand Oceans Group Limited, one of the five listed platforms of China Overseas Holdings Limited in Hong Kong, is a building and real estate development enterprise focusing on the development of mid- to high-end residences. China Overseas Grand Oceans Group Limited was formerly known as Shell Electric Manufacturing (Holdings) Company Limited which was incorporated in 1955 and was listed on The Stock Exchange of Hong Kong in 1984. In March 2010, China Overseas Land & Investment Limited (00688.HK) completed the acquisition of Shell Electric Manufacturing (Holdings) Company Limited which was renamed China Overseas Grand Oceans Group Limited (00081.HK) (hereinafter referred to as "COGO"). COGO currently has its presence in 40 cities in the east, west, central, northeast and other parts of China.

Ganzhou Company - Binjiang Yihao Project

ABOUT COGO

Focusing on the properties for sale and extending to the properties held and the innovative properties, COGO has its business system and characteristic operation "focusing on the housing real estate development and holding core commercial properties for long terms". COGO has held and operated 4 hotel resorts, 3 office buildings, 3 shopping centers, 7 commercial blocks and 1 residential property for lease. Our business operated and to be developed covers a total area of more than 1.6 million m^2.

Focusing on the housing real estate development and holding core commercial properties for long terms.

4 Hotel Resorts

3 Office Buildings

3 Shopping Centers

7 Commercial Blocks

1 Residential Property for Lease

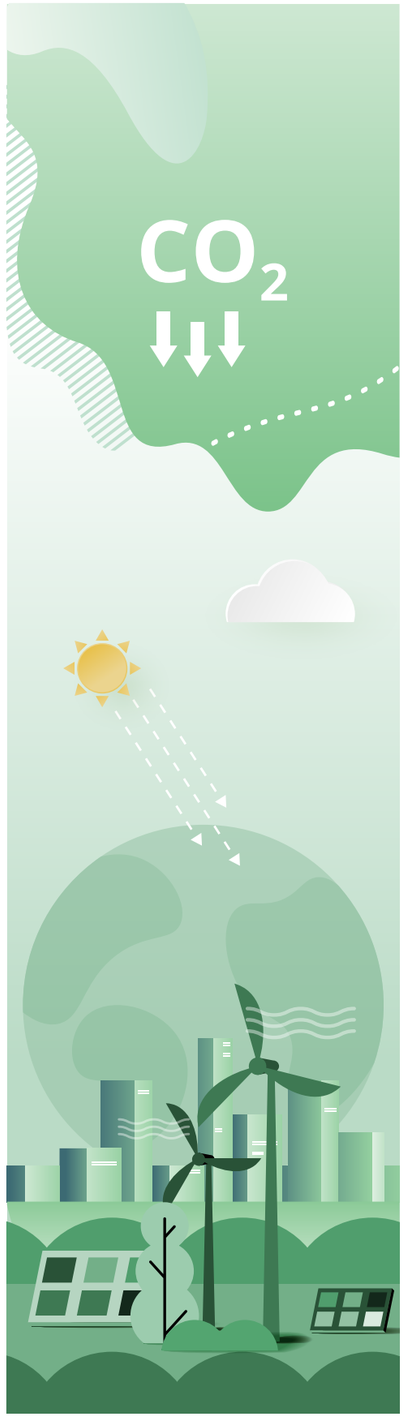
Business operated and developed area

1.6 million m^2

COGO has been included in the list of eligible securities for Southbound Trading, and has been included in several authoritative indexes such as the Hang Seng Composite Index series of the Stock Exchange of Hong Kong, the Morgan Stanley Capital International (MSCI) Index, the S&P 500 Index, the FTSE indices, etc. The three major international credit rating agencies assigned "investment grade" ratings to us, while China Chengxin International Credit Rating Company Limited ("CCXI"), a domestic credit rating agency, assigned to us the highest "AAA" credit quality.

Adhering to the research and development of zero-carbon technologies and putting zero-carbon projects into practice for long terms, COGO leads the construction and real estate industry towards green sustainable development, and now has made multiple technical breakthroughs in the field of ultra-low energy consumption buildings. On the basis of the successful project implementation of model clusters of ultra-low energy consumption, the Group is gradually able to carry out the development of ultra-low energy buildings and zero energy buildings, "carbon peaking and carbon neutrality" planning and consultation, research and development and production of green building materials and equipment, digital twining, intelligent operation and maintenance, etc. throughout the whole industrial chain, and provides data, technologies, construction methods, products and other scientific and technical supports to the implementation of the national "carbon peaking and carbon neutrality" strategy in the industry, and delivers professional comprehensive "zero-carbon" construction development solution for its customers, to proactively build an industry-leading service platform for low-carbon buildings.

COGO explores the innovative business development path focusing on the low-carbon technologies and builds the green development model that reduces carbon emissions and energy consumption throughout the real estate development process, in a bid to present an industrial chain layout over the whole cycle of zero-carbon buildings.



COGO'S VISION AND OBJECTIVE OF CARBON NEUTRALITY

At the United Nations General Assembly in September 2020, Xi Jinping, President of the People's Republic of China announced that China will strive to reach a peak in its carbon dioxide (CO2) emissions before 2030 and achieve carbon neutrality before 2060. In November 2020, the then Chief Executive Carrie Lam Cheng Yuet-ngor vowed in her Policy Address to set Hong Kong Special Administrative Region on a path to achieving carbon neutrality by 2050.

COGO has been deeply engaged in the field of ultra-low energy buildings for many years, and energy conservation and low carbon have long become the core issue of COGO. Low-carbon technology innovation, which has been deeply integrated with the Group's core residential business, operation of commercial properties and boutique towns, and other businesses, is an internal embodiment of COGO's initiative to assume corporate social responsibility and practice the corporate philosophy of "Happiness and Leading the Trend".

After noting the fact that carbon emissions from the buildings and construction industry accounts for nearly **40%** of global carbon emissions, and as an enterprise with a strong sense of political responsibility and historical mission, a Hong Kong listed company and a leading enterprise in China's real estate industry with nationwide presence, COGO is not only willing to consciously take the responsibility to actively fulfill the national "carbon peaking and carbon neutrality" strategy and implement the "carbon peaking and carbon neutrality" goals, but also actively responds to the vision of the Hong Kong Special Administrative Region to achieve "carbon neutrality" before **2050**. Taking the path of ecological priority, green and low-carbon development is an inevitable choice for COGO to achieve high-quality development.

Based on the sorting, accounting and verification of the GHG emissions of COGO in 2021, as well as the accounting and analysis of the carbon emissions of the whole life cycle of the development projects, after reasonable calculation, COGO has formulated the following **"carbon peak and carbon neutrality"** goals:

COGO "CARBON PEAK AND CARBON NEUTRALITY" GOALS:

100%

By **2029**, the Company will achieve carbon peaking within the operational boundaries, realize comprehensive electrification, and stop using fossil fuels. By **2049** , the Company will fully secure 100% renewable energy utilization, and achieve carbon neutrality within the operational boundaries, with a 50% increase in the implementation ratio of ultra-low energy buildings, near-zero energy buildings, and zero energy buildings, a 60% reduction in carbon emission intensity compared with the base year, and a significant emission reduction in the whole life cycle of the buildings.

By preparing and releasing this White Paper on Carbon Neutrality, COGO aims to convey the brand concept of green and sustainable development to consumers and advocate green production and lifestyle. COGO will strive to realize its good vision to **"wholeheartedly forge ahead with the carbon peaking and carbon neutrality goals of COGO, and be committed to promoting the low-carbon development of the industry".**

ACTION PRINCIPLES

In the journey of zero-carbon development, COGO will uphold the following

SIX ACTION PRINCIPLES:

RESPONSIBLE

We will play a pioneering role as an enterprise, by taking the initiative to assume the responsibility of emission reduction and striving to reduce carbon emissions at all stages of the operations of the Company and the whole life cycle of buildings, in order to help the country achieve the "carbon peaking and carbon neutrality" goals.

ORDERLY

We will promote carbon peaking and carbon neutrality in an orderly manner, aiming to achieve carbon peaking within operational boundaries in the near future, striving to achieve carbon neutrality in the long term, and planning to implement carbon peaking and carbon neutrality actions step by step.

INNOVATIVE

We will take technological innovation as the driving force, give full play to the advantages of ultra-low energy building technologies, and increase investment in low-carbon technologies research and development, so as to provide technical support to achieve the goal of carbon neutrality.

TRANSPARENT

We will regularly disclose carbon neutrality plans, actions and progress in strict accordance with relevant international and national requirements to ensure the openness and transparency of information and data.

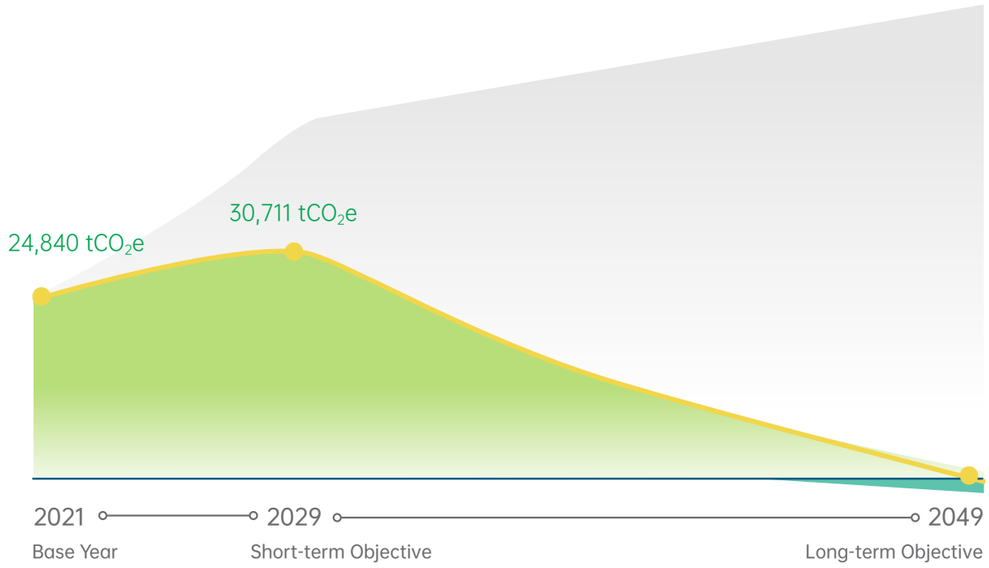
COOPERATIVE

We will work with the upstream and downstream value chain stakeholders to jointly explore comprehensive solutions for zero-carbon buildings, share green and low-carbon values, and promote the whole industry towards a greener future.

WIN-WIN

We are committed to building zero-carbon buildings, continuously improving the residential living experience, making green consumption the preferable choice of customers, and building a greener and better life together.

CARBON NEUTRALITY MILESTONES



SHORT-TERM OBJECTIVE

By 2029, COGO will achieve carbon peaking within the operational boundaries, realize comprehensive electrification, and stop using fossil fuels, with the per capita carbon emissions 23% lower than that of the base year (2021).

For projects developed by COGO, the accounting system and data management of the carbon emissions of the whole life cycle of the buildings will be comprehensively improved, and the carbon emission reduction throughout the life cycle of buildings by comprehensively promoting the application of ultra-low energy building technologies will be continuously promoted, by 2029.

LONG-TERM OBJECTIVE

By 2049, COGO will fully secure 100% renewable energy utilization, and achieve carbon neutrality within the operational boundaries of the Company.

For projects developed by COGO, there will be a 50% increase in the implementation ratio of ultra-low energy buildings, near-zero energy buildings, and zero energy buildings, a 60% reduction in carbon emission intensity compared with the base year, and a significant emission reduction in the whole life cycle of the buildings. COGO has, together with key upstream and downstream value chain stakeholders, made unremitting efforts to achieve an all-round and continuous reduction in carbon emissions throughout the whole life cycle of buildings, including the production, construction, operation and maintenance stages of building materials, and strive to build whole-life-cycle zero-carbon buildings.

COGO's Carbon Emissions Status

02

NECESSITY OF COGO'S CARBON PEAKING AND CARBON NEUTRALITY ACTIONS

From a global perspective, the buildings and construction industry needs to accelerate net-zero-carbon emissions progress to meet the temperature control goals set forth in the Paris Agreement. 2022 Global Status Report for Buildings and Construction published by United Nations Environment Programme[3] finds that in 2021, the carbon emissions of the buildings and construction industry in the world keep rising, and the carbon emissions resulting from operation of buildings and production of building materials accounted for around 37% of carbon emissions globally. According to the 2022 Research Report of China Building Energy Consumption and Carbon Emissions[China Association of Building Energy Efficiency. 2022 Research Report of China Building Energy Consumption and Carbon Emissions, 2022.] published by China Association of Building Energy Efficiency, in 2020, the total carbon emissions of construction and operation of buildings and production of building materials accounted for about 50.9% of the total carbon emissions in China. Thus, it can be seen that in order to achieve China's "carbon peaking and carbon neutrality" goals, it is urgent to promote the carbon neutrality process of the buildings and construction industry. Real estate companies are responsible for the development, operation and renovation of buildings and play an extremely important role in the entire buildings and construction industry.

In recent years, relevant policies for green and low-carbon development in the construction field have been emerging, providing strong support for the green transformation of real estate enterprises from the policy level. In 2021, the General Office of the CPC Central Committee and the General Office of the State Council issued the Opinions on Promoting the Green Development of Urban and Rural Construction, which proposes to transform the development mode of urban and rural construction, construct high-quality green buildings, and implement carbon peaking and carbon neutrality actions in the construction field. The 14th Five-Year Plan for Building Energy Conservation and Green Building Development in Guangdong Province issued by the Department of Housing and Urban-Rural Development of Guangdong Province in 2022 sets forth many specific requirements in terms of improving the level of energy conservation and carbon reduction in buildings, accelerating the development of prefabricated buildings, and green development and application of building engineering materials.

As a Hong Kong listed company and a leading enterprise in China's real estate industry with nationwide presence, COGO has been insisting on building green, technological, low-carbon and healthy benchmark projects, actively promoting green and healthy building certification, and integrating low-carbon concepts into daily operations. By taking the initiative to start its zero-carbon transformation and relying on its own low carbon practices, COGO is committed to creating comprehensive solutions for low-carbon residential development, investing in low-carbon technology-related industries, accumulating low-carbon operation and maintenance related experience, hoping to create an exemplary model of "low-carbon empowered development", so as to lead the zero-carbon transformation of the whole industry.

COGO'S CARBON EMISSIONS AT THE ORGANIZATIONAL LEVEL

In accordance with the International Standard ISO 14064-1:2018, we made a comprehensive inventory of the Company's carbon emissions within the operational boundaries in 2021, which indicated that our total GHG emissions were 24,840 tCO_2e, of which:

Total GHG Emissions **24840** tCO_2e

- **Category 1:** GHG emissions were 1,638 tCO_2e, accounting for 6.6%;
- **Category 2:** GHG emissions were 21,351 tCO_2e, accounting for 86.0%;
- **Category 3:** GHG emissions were 1,424 tCO_2e, accounting for 5.7%;
- **Category 4:** GHG emissions were 428 tCO_2e, accounting for 1.7%.

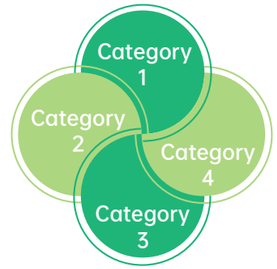


Figure 2-1 Percentage of GHG emissions reported in accordance with ISO 14064-1:2018

The reporting boundaries for GHG emissions at the corresponding organizational level are:

Category (ISO 14064-1 : 2018)	Scope (reported according to the GHG Protocol)	Category Description	Emission Source
1 Direct GHG emissions and removals (tCO_2e)	Scope 1	Emissions from stationary combustion	Natural gas canteen stoves, LPG canteen stoves
		Emissions from mobile combustion	Gasoline and diesel official cars
		Fugitive emissions from human activities	Air conditioning refrigerants, CO_2 fire extinguishers
2 Indirect GHG emissions from imported energy (tCO_2e)	Scope 2	Indirect emissions from imported electricity	Electrical equipment
		Indirect emissions from imported energy	Municipal heating, property heating, heating companies
3 Indirect GHG emissions from transportation (tCO_2e)	Scope 3	Emissions from business travels	Business flying
4 Indirect GHG emissions from products used by an organization (tCO_2e)		Emissions from goods purchased	Printing paper, roller-tip pens, printer cartridges, bottled water, etc.

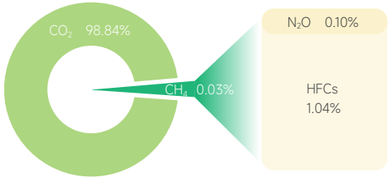
GHGs involved in Based year GHG emission inventory.

CO_2 **24551** tCO_2e

CH_4 **8** tCO_2e

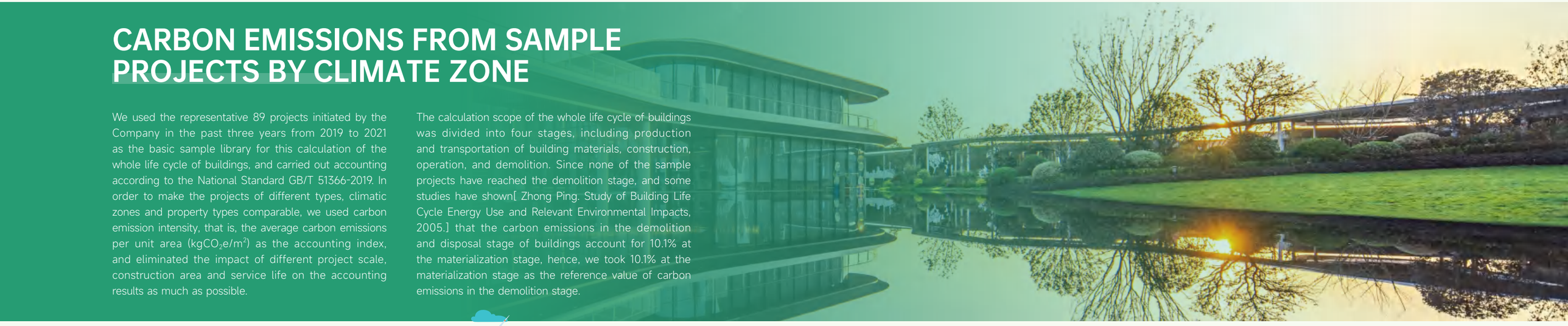
N_2O **24** tCO_2e

HFCs **257** tCO_2e



ISO14064-1:2018 classifies greenhouse gas emission sources into categories 1 to 6, corresponding to scope 1 to 3 in the GHG Protocol.

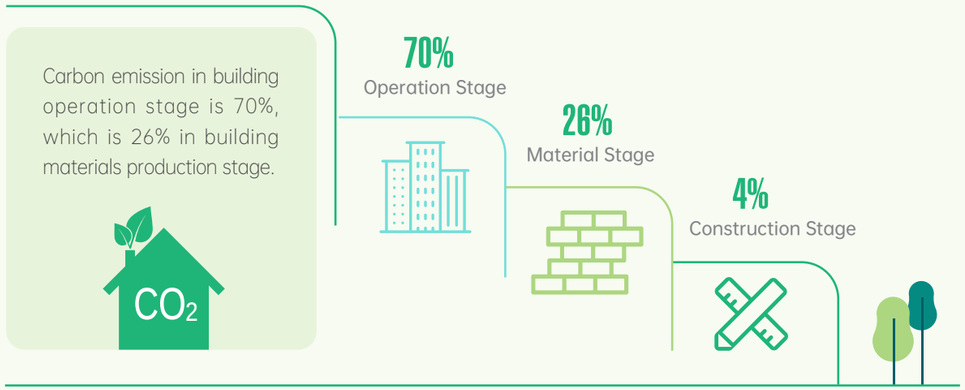
CARBON EMISSIONS FROM SAMPLE PROJECTS BY CLIMATE ZONE



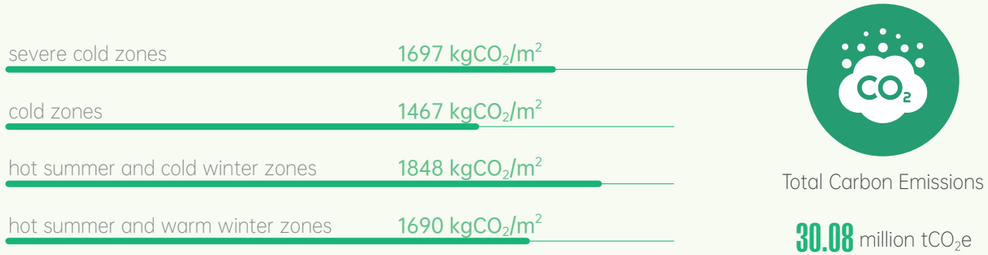
We used the representative 89 projects initiated by the Company in the past three years from 2019 to 2021 as the basic sample library for this calculation of the whole life cycle of buildings, and carried out accounting according to the National Standard GB/T 51366-2019. In order to make the projects of different types, climatic zones and property types comparable, we used carbon emission intensity, that is, the average carbon emissions per unit area ($kgCO_2e/m^2$) as the accounting index, and eliminated the impact of different project scale, construction area and service life on the accounting results as much as possible.

The calculation scope of the whole life cycle of buildings was divided into four stages, including production and transportation of building materials, construction, operation, and demolition. Since none of the sample projects have reached the demolition stage, and some studies have shown[Zhong Ping. Study of Building Life Cycle Energy Use and Relevant Environmental Impacts, 2005.] that the carbon emissions in the demolition and disposal stage of buildings account for 10.1% at the materialization stage, hence, we took 10.1% at the materialization stage as the reference value of carbon emissions in the demolition stage.

It is found upon analysis of the whole life cycle of the sample buildings, that carbon emissions in the operation stage and building materials production stage contributed the most, accounting for 70% and 26% of the total emissions, respectively. As a leader in low-carbon development in the industry, we have deeply tapped the emission reduction potential of the building operation stage and promoted the low-carbon and sustainable development of the industry through research on ultra-low energy consumption technologies.

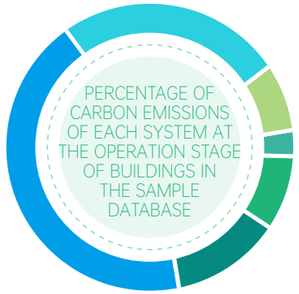


The total carbon emissions of the whole life cycle of the sample buildings were 30.08 million tCO_2e, and the average carbon emission intensity was 1,697 $kgCO_2/m^2$. Among them, the average carbon emission intensity of severe cold zones, cold zones, hot summer and cold winter zones, and hot summer and warm winter zones was 1,697 $kgCO_2/m^2$, 1,467 $kgCO_2/m^2$, 1,848 $kgCO_2/m^2$ and 1,690 $kgCO_2/m^2$, respectively.



Buildings in hot summer and cold winter zones: (i) will not only experience furnace-like summer, but their designers also need to take into account heating in winter; and (ii) compared with buildings in the severe cold zones and cold zones with envelop enclosure of excellent thermal insulation and buildings in the hot summer and warm winter zones where winter is relatively comfortable, will have a long running time of HVAC systems in a year, and thus higher CO_2 emissions. And the carbon emissions from running of HVAC systems generally account for about 20% of the whole life cycle of a building. Thus, it can be seen that the implementation of pertinent energy-saving and carbon reduction measures according to the characteristics of different climate zones can significantly reduce the carbon emission intensity of buildings.

CARBON EMISSION IN OPERATION STAGE



The domestic hot water supply system is the one with the highest carbon emission intensity in the operation stage, with an annual carbon emission intensity of 5.14~12.61 $kgCO_2e/(m^2 \cdot a)$ per unit area, accounting for about 43% averagely. The energy consumption of residents using domestic hot water is related to the climate zone, and the carbon emissions arising from domestic hot water in severe cold zones and cold zones are higher than those in hot summer and cold winter zones and hot summer and warm winter zones.

Followed by HVAC systems, their carbon emission intensity is 1.66~14.44 $kgCO_2e/(m^2 \cdot a)$, accounting for 25%. Due to climatic characteristics, the demand for cold and heat sources for HVAC systems in hot summer and warm winter zones is higher than that in hot summer and cold winter zones and severe cold zones, and the carbon emissions generated by the corresponding cold and heat source systems are higher.

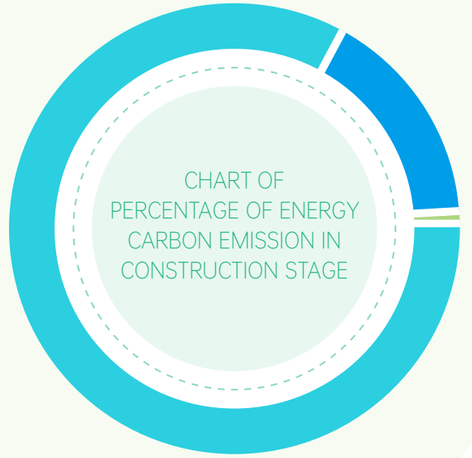
- **43%** Hot Water Supply System
- **25%** HVAC System
- **8%** HVAC Refrigerant
- **2%** Exhaust System
- **9%** Elevator System
- **13%** Lighting System

In the building operation period which is the main stage of energy consumption and carbon emission, we integrated the ultra-low energy design concept of green energy saving into the building planning and design stage, implementing the demand-side energy saving through promoting the passive design concept, achieving the carbon reduction of energy consumption side through applying high-efficiency energy-saving equipment, while promoting the project to use renewable energy to replace traditional fossil energy.

CARBON EMISSION IN CONSTRUCTION STAGE

The carbon emissions in the construction stage are mainly caused by the electricity consumption of the construction equipment at the project site, specifically, the electricity carbon emissions accounted for about 80% of the emissions in this stage, followed by the carbon emissions from the use of gasoline and diesel in the operation of machinery and equipment.

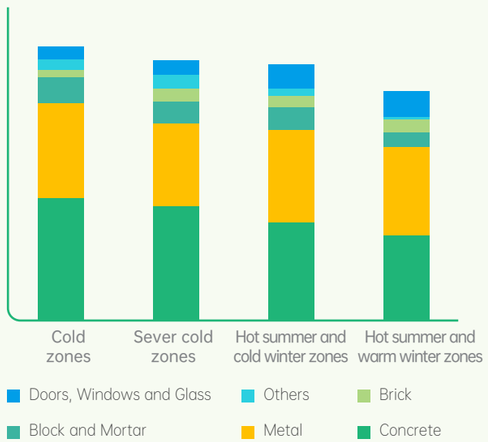
- **82.93%** Electricity
- **0.72%** Water
- **16.35%** Gasoline and Diesel



CARBON EMISSION IN THE STAGE OF PRODUCTION OF BUILDING MATERIALS

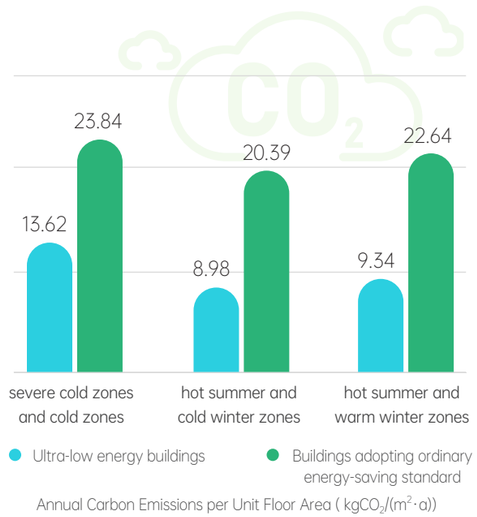
The construction of building works produces "embodied carbon emissions" every year, accounting for about 11% of global emissions. For single buildings, the production of building materials, as the second largest stage of carbon emission contribution in the whole life cycle of buildings, accounted for 20.56%~39.64%.

PERCENTAGE OF CARBON EMISSIONS PER UNIT AREA AT THE STAGE OF PRODUCTION OF BUILDING MATERIALS IN THE SAMPLE DATABASE



CARBON EMISSION OF DEMONSTRATIVE ULTRA-LOW ENERGY BUILDING

COGO adheres to low-carbon scientific research investment and project practice, and has developed ultra-low energy building technology solutions for severe cold zones and cold zones, hot summer and cold winter zones, and hot summer and warm winter zones. By comparing the carbon emission intensity of ultra-low energy buildings and ordinary projects in different climate zones during the operation stage, we find that ultra-low energy buildings have a significant effect in carbon reduction, with only half of the carbon emission intensity of ordinary projects.



Ultra-low energy buildings have significant carbon reduction effect in the operation stage. In order to achieve carbon peaking and carbon neutrality in the buildings and construction industry as soon as possible, we will vigorously promote the application of ultra-low energy consumption technologies for demand-side energy conservation and consumption-side carbon reduction in project implementation, so as to contribute to energy conservation and carbon reduction in the buildings and construction industry.

03

Carbon Neutrality Action

Based on COGO's calculation and analysis of the future "carbon peaking and carbon neutrality" within the Company's operational boundaries, as well as the future outlook of the carbon emissions of the whole life cycle of the project buildings, we put forward the carbon neutrality action plan catering for COGO centered on the carbon neutrality vision and the carbon neutrality objectives in two stages, building a **"3+10+5"** carbon neutrality action system of COGO covering three dimensions, ten major measures, and five braces.

One Vision

Wholeheartedly forge ahead with the carbon peaking and carbon neutrality goals of COGO, committed to promoting the low-carbon development of the industry.

Two Milestones

- Carbon peaking within the Company's operational boundaries by 2029
- Carbon neutrality within the Company's operational boundaries by 2049

Three Dimensions

- Lead the low-carbon and healthy development of the industry
- Promote low-carbon transformation of supply chain
- Create a model of the Company's low-carbon management

Ten Major Measures

- Continuously reduce the embodied carbon of the buildings
- Actively implement green construction
- Efficient and intelligent operation and maintenance
- Scientific management of demolition of abandoned buildings
- Save energy and improve efficiency in office space
- Increase the utilization proportion of clean energy
- Encourage low-carbon behaviors among employees
- Formulate green and low-carbon evaluation standards for suppliers
- Strengthen cooperation with allied enterprises
- Facilitate the zero-carbon transformation of the construction industry with green finance

Five Braces

- Technology Support
- Digital Empowerment
- Green Finance
- Mechanism Innovation
- Talent Training

LEAD THE LOW-CARBON AND HEALTHY DEVELOPMENT OF THE INDUSTRY

Promoting the low-carbon and healthy development of buildings is a new goal and new requirement for the current development of the real estate industry. As a pioneer in fulfilling low carbon management throughout the whole life cycle of buildings in the industry, COGO has kept tapping the emission reduction potential of various key processes throughout the whole life cycle of buildings, and established four major R&D bases in the Greater Bay Area, Southern China, Eastern China and Northern China for different climate zones and with the support of key technologies for ultra-low energy buildings, so as to make scientific and technological innovation with practical actions and lead the low-carbon and healthy development of the real estate industry.

FIGURE 3-1 R&D BASE IN THE GREATER BAY AREA

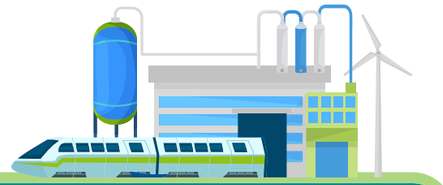
FIGURE 3-2 R&D BASE IN SOUTHERN CHINA

FIGURE 3-3 R&D BASE IN EASTERN CHINA

FIGURE 3-4 R&D BASE IN NORTHERN CHINA

CONTINUOUSLY REDUCE THE EMBODIED CARBON OF THE BUILDINGS

Paying attention to carbon emissions in the production and transportation stages of building materials and reducing the embodied carbon of buildings is an important part to lead the low-carbon and healthy development of the industry. Low-carbon building materials have always been one of the key research directions of COGO, and in the future, we will also give priority to green building materials, reduce the use of high-carbon building materials, strengthen the recycling of building materials, and promote the green transportation of building materials, so as to achieve emission reduction in the production and transportation stages of building materials.



01

GIVE PRIORITY TO GREEN BUILDING MATERIALS

We will increase the proportion of green building materials used in the construction of new buildings and renovation of existing buildings, especially energy-saving glasses, new thermal insulation materials, and new wall materials; promote the application of high-strength steel bars, high-performance concrete, hot-rolled section steel and weathering steel for construction, high-performance doors and windows and other materials, and explore the use of prefabricated components and parts with excellent performance.

02

REDUCE THE USE OF HIGH-CARBON BUILDING MATERIALS

In the building design stage, we will take the embodied carbon as an important consideration, accurately control and reduce the use of high-carbon building materials products, focus on promoting the reduction of the use of cement, and gradually increase the proportion of low-carbon cement such as high belite cement and sulphoaluminate (aluminoferriate) cement, continue to invest in the research and development and application of low-carbon building materials such as new aerogel insulation materials and synthetic resin curtain walls, and explore the feasibility of replacing high-carbon building materials with low-carbon building materials.

03

STRENGTHEN THE RECYCLING OF BUILDING MATERIALS

Through the research and development of building materials recycling technologies and equipment, we will strengthen the recycling of building materials, and realize the detachable and recyclable building components, thereby reducing the amount of building materials used in the project as a whole and the embodied carbon in the building.

04

PROMOTE GREEN TRANSPORTATION OF BUILDING MATERIALS

Firstly, clean energy alternatives for building materials transportation in the same city will be formulated and implemented, vehicles used for transportation in the same city will be gradually replaced with clean energy ones, and the application and promotion of new energy vehicles in long-haul transportation will be gradually explored. Intelligent means and algorithms will be used to plan the transportation routes of building materials, select the optimal transportation route, reduce the empty mileage and idle operation of transportation vehicles, and make efficient use of transportation resources, so as to achieve carbon emission reduction in the transportation process.

ACTIVELY IMPLEMENT GREEN CONSTRUCTION

We will implement building construction efficiently and scientifically, by actively promoting prefabricated buildings, scientifically formulating low-carbon construction plans, vigorously promoting energy-saving construction equipment, and introducing digital technologies such as BIM and the IoT.

01

ACTIVELY PROMOTING PREFABRICATED BUILDINGS

COGO will continue to give full play to its advantages in prefabricated technologies and accelerate the application of prefabricated buildings in projects across the country. By adopting technologies such as modular optimization design of prefabricated shear walls and overall prefabrication of bay windows in the construction drawings splitting design stage, the number of components can be further reduced, while shortening the on-site installation time, improving the construction efficiency, and reducing the energy consumption in the construction process, thereby generating carbon emission reduction effect.

02

SCIENTIFICALLY FORMULATING LOW-CARBON CONSTRUCTION PLANS

By formulating a scientific construction organization plan, both the transportation of materials and personnel in the construction site and the mechanical use of the construction process can be reduced. Efforts will also be made to actively promote energy-saving construction equipment, monitor the energy consumption of key equipment, and implement group control management for multiple similar equipment.

03

VIGOROUSLY PROMOTING ENERGY-SAVING CONSTRUCTION EQUIPMENT

We will encourage the use of clean energy in construction machinery, and fully consider the use of renewable resources such as solar energy, geothermal energy, and wind energy at construction sites where conditions permit, according to local climate and natural resource conditions.

04

INTRODUCING DIGITAL TECHNOLOGIES SUCH AS BIM AND IOT

The integrated application of new technologies such as BIM, Internet, IoT, big data, cloud computing, artificial intelligence, and blockchain in the whole process of construction will be increased to achieve refined construction.

EFFICIENT AND INTELLIGENT OPERATION AND MAINTENANCE

Carbon emissions from the operation and maintenance stage often account for more than 60% of those in whole life cycle of buildings, and the emission reduction in this stage plays a key role. With the support of the key technologies for ultra-low energy buildings, COGO is able to achieve emission reduction in the operation and maintenance stage of buildings through (i) energy saving, quality improvement and efficiency enhancement, (ii) optimization of energy consumption structure, and (iii) promotion of digital twin technologies.

IMPLEMENT ENERGY SAVING, QUALITY IMPROVEMENT AND EFFICIENCY ENHANCEMENT TO REDUCE THE OVERALL ENERGY CONSUMPTION LEVEL OF BUILDINGS

The requirements of carbon emission reduction will be taken into account during the project planning and design stage, with an aim to reduce the overall energy consumption level of residential buildings through reasonably determining the orientation of the residence, the ratio of windows to walls, the number of shape systems and the layout of the building, and fully considering the characteristics of different climate zones. Further, high-performance envelop enclosure design solutions will be adopted, such as optimizing the design of insulation structures, exterior window installations, airtight design and thermal bridge-free design in severe cold zones, to reduce the demand for active heating in buildings. Efforts will be made to focus on improving the energy efficiency of energy consumption equipment such as HVAC, lighting, hot water, and elevator systems, and provide appropriate options from the perspectives of energy saving, reliability and economy for projects in different climate zones.

OPTIMIZE THE ENERGY CONSUMPTION STRUCTURE TO CARRY OUT PILOT PHOTOVOLTAIC PROJECTS IN BUILDINGS

COGO will, combined with the sunshine radiation characteristics of different climate zones of the projects, set up rooftop photovoltaic power generation systems in areas rich in solar energy resources to supply power to common area of residential building, and coordinate the application of solar photovoltaic and solar thermal system in buildings in areas where conditions permit, that is, applying electricity or thermal energy as appropriate.

In the future, COGO will also actively carry out the pilot work of new building power system construction, explore the application of "PEDF" technology, and realize flexible and adjustable electricity demand. For residential projects, COGO will strive to promote the electrification of building heating, domestic hot water, cooking and other aspects, and explore the realization of diversified energy use in residential projects, actively promote the application of air-source heat pump technology in cold zones and hot summer and cold winter zones, and apply geothermal energy, air heat energy, biomass energy, etc. to optimize the energy consumption structure of buildings.

PROMOTE DIGITAL TWIN TECHNOLOGY TO ACHIEVE INTELLIGENT BUILDING OPERATION AND MAINTENANCE

COGO will promote the application of energy and carbon asset management operation and maintenance system based on digital twin technologies, integrate advanced information technologies such as IoT, video surveillance, artificial intelligence, etc., fill the information gap in the construction and operation and maintenance stages, integrate static basic data and dynamic operation data of buildings, promote the application of BIM in the building life cycle, improve the intelligent level of building operation and maintenance management of residential communities, and achieve the goals of energy saving, efficiency improvement and carbon reduction through refined and intelligent comprehensive management, reduce equipment failure rate, and help the construction of smart communities.

SCIENTIFIC MANAGEMENT OF DEMOLITION OF ABANDONED BUILDINGS

IMPROVE THE MANAGEMENT SYSTEM ON DEMOLITION OF ABANDONED BUILDINGS

COGO will improve the management system on demolition of abandoned buildings, strictly abide by the relevant requirements of the Notice of Ministry of Housing and Urban-Rural Development on Preventing Large-scale Demolition and Construction in the Implementation of Urban Renewal Actions[Ministry of Housing and Urban-Rural Development. Notice of Ministry of Housing and Urban-Rural Development on Preventing Large-scale Demolition and Construction in the Implementation of Urban Renewal Actions (Jian Ke [2021] No. 63), 2021.], and explore the use of retention, repair and reinforcement of existing buildings to carry out urban renewal and increase the service life of buildings. In the design stage, COGO implemented flexible living space design to reduce the waste of resources caused by renovation or demolition.

SCIENTIFICALLY FORMULATE BUILDING DEMOLITION PLANS

For demolished buildings, scientific demolition plans will be developed to reduce the use of materials and the transportation of personnel, simplify the operation in the demolition process, and try to choose energy-saving construction and demolition machinery and equipment, optimize the use efficiency of machinery, and reduce the carbon emissions in the demolition process. The time of demolition operations will be reasonably arranged to reduce night operation hours, electricity consumption for night lighting, and carbon emissions caused by additional energy consumption.

RESOURCEFUL DISPOSAL OF CONSTRUCTION WASTE

We will strengthen the control over construction waste and increase the resourceful disposal of construction waste; promote the reduction and harmless development of construction waste, facilitate the centralized treatment, classification and utilization of construction waste, realize the turning of construction waste into wealth and useful products, and improve the resourceful utilization rate of construction waste.

STRENGTHEN THE RESEARCH AND DEVELOPMENT ON BUILDING MATERIALS REUSE TECHNOLOGIES

We will strengthen the research and development on building materials reuse technologies, and explore the use of products made from recycling of waste building materials in the projects constructed by COGO, such as the use of waste bricks and stones and other recycled building materials in landscape paving and other projects, which will help reduce the production and use of primary building materials, thereby reducing the carbon emissions of the entire industry.

CREATE A MODEL OF THE COMPANY'S LOW-CARBON MANAGEMENT

We will create a model of the Company's low-carbon management from such aspects as saving energy and improving efficiency in office space, increasing the utilization proportion of clean energy, encouraging low-carbon behaviors among employees and carbon offsetting, in order to realize COGO's annual carbon neutrality goal and annual milestones.

SAVE ENERGY AND IMPROVE EFFICIENCY IN OFFICE SPACE

01 IMPROVE THE LEVEL OF ENERGY EFFICIENCY MANAGEMENT OF OFFICE SPACE

For existing office buildings, we will strengthen energy efficiency management and technological transformation in the future. For the office buildings owned by COGO, we will continue to pay attention to energy consumption and carry out operation optimization work.

02 STRENGTHEN THE APPLICATION OF HIGH-EFFICIENCY ENERGY-SAVING EQUIPMENT

We will focus on energy-intensive equipment, and continue to carry out energy-saving renovations of lighting, HVAC, water and other facilities on the basis of safe operation of facilities without jeopardizing the experience of employees, and continue to promote the emission reduction of office buildings.

03 PROMOTE ENERGY AND CARBON ASSET MANAGEMENT OPERATION AND MAINTENANCE SYSTEM BASED ON DIGITAL TWIN TECHNOLOGIES

We will gradually promote the energy and carbon asset management operation and maintenance system based on digital twin technologies, and centrally deploy the intelligent operation and maintenance platform for intelligent control of lighting, air conditioning, fresh air and other equipment, which can not only realize daily intelligent and active energy conservation and carbon reduction, but also analyze and optimize operation management based on energy consumption and carbon emission monitoring data, so as to achieve continuous improvement of energy conservation and carbon reduction.

INCREASE THE UTILIZATION PROPORTION OF CLEAN ENERGY

01 ACCELERATE THE ELECTRIFICATION OF VEHICLES

Improvement of the level of electrification and gradual increase of the proportion of renewable energy electricity is a key step for COGO to achieve the goal of carbon neutrality within the operational boundaries. We will help achieve the goal of full electrification of the Company's operations by 2029 by developing and gradually implementing a replacement plan for fuel official cars.

02 GRADUALLY IMPLEMENT THE CONSTRUCTION OF FULLY ELECTRIC CANTEENS

We will promote the full electrification of canteen cooking in an orderly manner, and help achieve the goal of full electrification of the Company's operations by 2029 by developing and gradually implementing a replacement plan for canteen cooking equipment.

03 ORDERLY DEVELOPMENT OF DISTRIBUTED PHOTOVOLTAICS

The development of distributed photovoltaics is one of the main ways for us to continuously increase the proportion of renewable energy electricity in the Company. We plan to build rooftop photovoltaic and other facilities in office spaces where conditions permit, helping to achieve the goal of 100% renewable energy.

04 ACTIVELY PROCURE GREEN ELECTRICITY

We will actively purchase green electricity, formulate systematic transaction strategies and methods for renewable energy and electricity, continuously optimize and adjust transaction strategies according to market conditions, explore long-term agreements to secure renewable energy and electricity projects, ensure long-term and stable purchase of renewable energy and electricity, and ultimately achieve the goal of 100% renewable energy.

ENCOURAGE LOW-CARBON BEHAVIORS AMONG EMPLOYEES

COGO has always adhered to the concept of "promoting frugality and low-carbon corporate management", and advocated employees to start from everyday deeds to save every piece of paper, every kWh of electricity and every drop of water.

01 PROMOTE PAPERLESS OFFICE

In 2022, COGO has launched the theme activity of"Paperless Office", carrying out paperless office through: electronic signature, online processes and paperless reporting, and will continue to build a paperless office platform in the future, making paperless office a conscious choice for employees.

02 ENCOURAGE LOW-CARBON BUSINESS TRAVEL

We encourage employees to arrange business activities reasonably, reduce unnecessary travel, increase the proportion of video or teleconferencing business negotiations, give priority to low-emission travel modes such as public transportation for short-haul business travel, and high-speed rail for long-haul business travel to reduce GHG emissions caused by airplanes.

03 ADVOCATE FOR GREEN ONLINE MEETINGS

In 2022, COGO focused on low-carbon meetings and held themed activities of "One-week Low Carbon Meeting Challenge" and "Simplified Meeting Initiative" to reduce GHG emissions caused by reporting materials, transportation, accommodation, air conditioning and other resources used to hold meetings. In the future, we will continue to carry out a series of low-carbon meeting activities and advocate employees to give priority to green online meetings.

04 EXPLORE THE INCENTIVE MECHANISM OF CARBON CREDITS FOR EMPLOYEES

We have explored the establishment of an internal carbon credit incentive mechanism within the Company to give value to employees' energy conservation and carbon reduction behaviors, by establishing an internal "carbon trading" platform. The emission reductions generated by employees' low-carbon business travel will be calculated to give employees corresponding internal carbon credits, which may be used to redeem gifts, receive internal discount, exchange services, etc. on the "carbon trading" platform.

CARBON OFFSETTING

Despite the effort to reduce GHG emissions in our operations through measures of saving energy and improving efficiency in office space, increasing the utilization proportion of clean energy, and encouraging low-carbon behaviors among employees, a small amount of carbon emissions are inevitable. We will follow the HKEX's Practical Net-Zero Guide for Business by purchasing high-quality carbon credits for carbon offsetting to achieve carbon neutrality within our operational boundaries.

High-quality carbon credits refer to carbon credits that are additional, quantifiable, real, permanent and socially beneficial, and can facilitate capital flows in underinvested sectors, especially to help the de-carbonization process of developing countries. We understand and support UN Secretary-General António Guterres' statement at COP27 that "we must have zero tolerance for net-zero greenwashing" and hope that the money we spend to offset "inevitable" emissions will yield real emissions reduction benefits in the real world.

PROMOTE LOW-CARBON TRANSFORMATION OF SUPPLY CHAIN

COGO expects to work with industry partners to create a new era of low-carbon and healthy residence, jointly explore low-carbon transformation solutions for the entire real estate industry chain, and promote value chain stakeholders to head towards a more sustainable future.

FORMULATE GREEN AND LOW-CARBON EVALUATION STANDARDS FOR SUPPLIERS

GRADUALLY RAISE THE ENTRY THRESHOLD FOR LOW-CARBON SUPPLIERS

COGO has always attached great importance to suppliers, and we hope that suppliers can also grow with us in terms of green and low-carbon development. We will formulate "green and low-carbon" guidelines for suppliers, gradually raise the entry threshold for low-carbon suppliers, and require suppliers to improve their green and low-carbon related performance.

IMPROVE THE EVALUATION STANDARDS OF GREEN AND LOW-CARBON SUPPLIERS

We plan to add green and low-carbon related requirements to our supplier evaluation standards, by including carbon disclosure, carbon emission reduction and other related content to supplier evaluation, and setting a green and low-carbon core evaluation index system, and keep improving the supplier evaluation standards of COGO.

PRIORITIZE SUPPLIERS WITH CLIMATE ACTION

As mentioned above, COGO pays attention to the emission reduction of the whole life cycle of buildings, and we hope to implement green procurement in the future and give priority to low-carbon building materials to achieve emission reduction results throughout the whole life cycle of buildings. Therefore, we look forward to working more closely with suppliers who take the initiative to disclose and reduce their GHG emissions and product carbon footprints, and continue promoting the healthy development of the entire industry towards higher energy efficiency and lower carbon.

STRENGTHEN COOPERATION WITH ALLIED ENTERPRISES

STRENGTHENING EXCHANGES AND COOPERATION ON CLIMATE CHANGE AND SHARING INDUSTRY PRACTICAL EXPERIENCE

In 2021, COGO had been invited to serve as vice chairperson of the China Passive Building Alliance (CPBA). In the future, we will work with the CPBA members to carry out large-scale promotion of ultra-low and near-zero energy buildings and research on zero-energy and zero-carbon buildings. We look forward to strengthening exchanges and cooperation with business competitors, to promote the development of advanced technologies for ultra-low energy buildings, share industry best practices, enable more "zero-carbon solutions" to emerge in the industry, and push forward the "zero-carbon transformation" of the real estate industry.

FACILITATE THE ZERO-CARBON TRANSFORMATION OF THE BUILDINGS AND CONSTRUCTION INDUSTRY WITH GREEN FINANCE

COGO will increase financial innovation, expand financing channels, and help the zero-carbon transformation of the buildings and construction industry and enhance its influence in the capital market by making full use of green credit, exploring the issuance of carbon neutrality CMBS and green bonds, actively playing the role of green fund products, and innovating and developing green building supply chain financial services.

MAKE FULL USE OF GREEN CREDIT SUCH AS GREEN BUILDING DEVELOPMENT LOANS AND GREEN COMMERCIAL HOUSING LOANS

Green credit is an important external financing channel for the real estate industry. COGO will create an exemplary model of "low-carbon empowered development", which, by relying on the green building projects constructed by COGO's high standards, makes full use of green credit such as green building development loans and green commercial housing loans, to reduce financing threshold and financing costs.

FORMING A "ZERO CARBON BUILDING ALLIANCE" WITH UPSTREAM AND DOWNSTREAM ENTERPRISES IN THE SUPPLY CHAIN

We will form a "Zero Carbon Building Alliance" with upstream and downstream enterprises in the supply chain to provide stakeholders with all-round support of capital, technology and technical talents, especially for "specialized, sophisticated, featured and innovative" small and medium-sized supporting enterprises with the features of specialization, refinement, characterization and novelty, through special funds to provide financial support to help upstream and downstream enterprises in the green and low-carbon transformation of the supply chain.

EXPLORING THE ISSUANCE OF CARBON NEUTRALITY CMBS, GREEN BONDS AND OTHER GREEN FINANCING BACKED INSTRUMENTS

In order to realize the financial empowerment by innovative business, COGO will, by relying on excellent corporate operation capabilities and first-class brand influence, explore the issuance of carbon neutrality CMBS, green bonds and other green financing backed instruments with the support of high-quality underlying assets such as green and low-carbon building projects and ultra-low energy building projects, in order to reduce financing costs, and play an important demonstrative and leading role for real estate enterprises to issue green bonds for financing.

ACTIVELY PLAYING THE ROLE OF GREEN FUND PRODUCTS SUCH AS ESG FUND AND GREEN DEVELOPMENT FUND

Green fund can play a role in supporting the scientific research and technological development of green buildings and providing risk compensation for green building projects. This type of fund can make direct investment in the green buildings industry and projects, and support the research and development and promotion of green building technologies. COGO will further broaden financing channels by fully utilizing green fund products including ESG fund and green development fund.

INNOVATING AND DEVELOPING GREEN BUILDING SUPPLY CHAIN FINANCIAL SERVICES

We will work with upstream and downstream enterprises in the green building supply chain to innovate and develop green building supply chain financial services. We will explore the purchase of insurance for green building projects, and extend the field of green insurance underwriting to the upstream of the green buildings industry chain, such as green building materials quality and safety liability insurance, so as to ensure the quality of green building materials, and promote the overall transformation and upgrading of the green buildings industry chain in a green and low-carbon direction.

COGO's Practice for Carbon Peaking and Carbon Neutrality

04

TYPICAL DEMONSTRATIVE GREEN AND LOW-CARBON PROJECTS

ULTRA-LOW ENERGY BUILDINGS OF COGO'S GLORIOUSHIRE

The breakthrough of low-carbon building technologies is the key support for achieving the goals of carbon peaking and carbon neutrality in the buildings and construction industry. COGO has been deeply engaged in the field of ultra-low energy buildings for years, with remarkable results. **As the only residential zero-carbon building, the COGO'S Glorioushire Project has received continuous attention from all walks of life after being named as one of the 2022 Science and Technology Demonstration Projects of the Ministry of Housing and Urban-Rural Development.** In the construction of the ultra-low energy buildings of the Project, we invented 12 national patented technologies, used 3 autonomous region-level construction methods and 2 autonomous region-level excellent QC, published 3 papers, passed 2 scientific and technological achievement evaluations, and developed 2 ultra-low energy consumption standards.

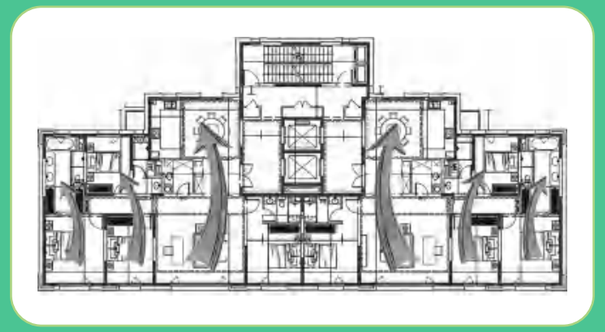
Located in Hohhot, Inner Mongolia Autonomous Region, **the Project is the first and largest ultra-low energy cluster demonstration project in the severe cold zones of China,** using passive technologies to significantly reduce the demand for active heating and cooling of buildings, and reduce energy consumption through the use of low-energy energy equipment. Through the practice of the Glorioushire Project, we have accumulated the technical advantages of demand-side energy conservation and consumption-side carbon reduction. From the perspective of the whole life cycle of buildings, the cumulative emission reduction effect of the ultra-low energy buildings in the operation stage is remarkable. Compared with ordinary energy-saving buildings, the ultra-low energy buildings of Glorioushire Project have reduced a total of about 1,347 tons of carbon dioxide per year in the operation stage, achieving a reduction rate of 40%.

FEATURE1 ULTRA-LOW ENERGY BUILDINGS OF COGO'S GLORIOUSHIRE

Located in Haoqinying Sub-district, Xincheng District, Hohhot, Inner Mongolia, the COGO'S Glorioushire Project is the first and largest ultra-low energy cluster demonstration project in the severe code zones of China, and the first passive ultra-low energy building cluster to achieve an overall heating energy saving rate of 92%. The Project covers a land use area of 158,739 square meters, with an ultra-low energy building floor area of 133,356 square meters, and adopts a cast-in-place reinforced concrete shear wall structure.

The Project mainly uses three key technologies to create ultra-low energy residence, namely reasonable building layout, high-performance envelope enclosure and efficient energy utilization.

REASONABLE BUILDING LAYOUT



SIMPLE AND REGULAR BUILDING SHAPE

REASONABLE BUILDING LAYOUT

Heat load is decreased by reducing heat surfaces and structural thermal bridges through simple building shape design. The design of shallow in depth and wide facade makes full use of natural ventilation and lighting to meet the needs of obtaining solar radiation heat as much as possible in winter.

HIGH-PERFORMANCE ENVELOPE ENCLOSURE

INSULATION STRUCTURE

In severe code zones, through the performance design, 250/260 mm thick graphite polystyrene board plus rock wool isolation belt is used as the insulation materials, by the process of double-layer staggered splicing. The insulation of the parts in contact with the cold and wet environment is realized by adopting internal and external waterproof measures to effectively maintain the integrity of the insulation.

EXTERIOR WINDOW INSTALLATIONS

The passive window of aluminum-clad wood with three-glasses, two-cavities and two low-e coatings with argon gas fill, can effectively reduce indoor and outdoor heat exchange and solve the problem of greater heat loss of exterior windows in conventional projects. In terms of installation, the tongue-and-groove installation method for recessed exterior windows can provide better stability, durability and safety.

AIRTIGHT DESIGN

Select applicable materials, carry out refined node design for door holes, window holes, pipeline penetrations and other parts that are prone to air tightness problems, and adopt the construction method of full shear structure and pull tab aluminum shuttering system to effectively ensure air tightness.

THERMAL BRIDGE-FREE DESIGN

Through CFD software modeling simulation and solid template testing, a 50 mm thick thermal insulation material is filled between the pipelines and the envelope enclosure to make a thermal bridge-free design. The cold and thermal bridge-free system can greatly improve the thermal insulation performance of the building, reduce the demand for cooling and heating load, keep the indoor temperature constant, and avoid indoor condensation and mold.

EFFICIENT ENERGY UTILIZATION

SELECTION OF COLD AND HEAT SOURCES

For projects in different climate zones, suitable solution for cold and heat source options can be provided from the perspectives of energy saving, reliability and economy, for example, selecting fresh air cooling and heat source heat pump all-in-one machine + electric heating film as auxiliary heating form for heating systems in severe cold zones.

FRESH AIR SYSTEM

For the fresh air system combining the cooling and heat sources, we select the fresh air heat pump all-in-one machine system with heat recovery system, which can effectively reduce the volume of the equipment, with a heat recovery efficiency reaching 75%, and a wind speed of less than 3m/s.

PHOTOVOLTAIC APPLICATION

A rooftop photovoltaic power generation system is set up to supply power to common area of residential building, to increase the utilization proportion of renewable energy.

INTELLIGENT OPERATION AND MAINTENANCE

Intelligent operation and maintenance is achieved by collecting and monitoring energy consumption data with an intelligent building energy management platform, and by optimizing equipment operation strategies based on actual energy consumption data.

The low-carbon practice of the Project has received continuous attention from all walks of life, and leaders and customers at all levels have fully affirmed the energy saving, carbon reduction, healthy and green production method and lifestyle brought by our ultra-low energy building technologies. The Project has achieved several breakthroughs in ultra-low energy building technologies and won a number of national, provincial / departmental and municipal awards. The Project is also the only residential project named as the 2022 Science and Technology Plan "Zero Carbon Building Technology Demonstration Project" of the Ministry of Housing and Urban-Rural Development.

Technology Innovation

12 National Patented Technologies	A drilling device for installation of thermal bridge-free vent pipes of a passive house A liftable steel platform located in a corridor light well A kind of cutter for cutting vapor barrier membrane and vapor permeable membrane of a passive houseA passive ultra-low energy consumption exterior window with convenient construction A thermal insulation device installed between the concrete and the balustrades of a passive house A multi-functional all-in-one unit installed on the exterior walls of a passive house A joint control device installed in the air-makeup system of a passive house An integrated connection device between passive door and concrete A thermal insulation bracket installed in an external passive window An integrated embedded device for piercing the exterior wall holes of a passive house An integrated lock insulation board installed on the exterior walls of a passive house A heat insulation break bridge device installed in the outer envelope enclosure of a passive house
3 Autonomous Region-level Construction Methods	Construction method of thermal bridge-free technologies for passive house residence Construction method of pull tab aluminum shuttering system of a passive house Construction method of pasting vapor barrier membrane and vapor permeable membrane
2 Autonomous Region-level Excellent QC	Passive building airtightness process innovation Improvement of the airtightness qualification rate of exterior windows of ultra-low energy buildings

Academic Achievements

3 Papers	Research and Practice of Key Technologies of Ultra-low Energy Buildings in Severe Cold Zones --- Hohhot COGO Glorioushire Project Analysis of the Design Points and Operation Effect of Ultra-low Energy Residential Buildings in Severe Cold Zones: A Case Study of COGO Glorioushire Project Value Analysis of the Large-scale Development of Ultra-low Energy Buildings in Severe Cold Zones under the Background of Carbon Peaking and Carbon Neutrality: A Case Study of COGO Glorioushire Ultra-low Energy Consumption Project
2 Scientific and Technological Achievements Evaluation	Research and industrialization practice of key technologies of ultra-low energy residential buildings in severe cold zones Research on airtightness control measures for passive ultra-low energy buildings
2 Ultra-low Energy Consumption Standards	Technical Standard for Ultra-low Energy Green Residential Buildings Code for Energy Saving Design of Passive Ultra-low Energy Green Residential Buildings

Awards & Honors

2 National Marks	National Ultra Low Energy Consumption Building Design Label National Healthy Building Two-Star Design Label
1 National Engineering Award	Nominated Project for The 10th National Guangsha Award
8 Provincial / Departmental Engineering Awards	Nominated Project for Guangsha Award in Inner Mongolia Autonomous Region Golden Award for Quality Structure of Construction Engineering in Inner Mongolia Autonomous Region Demonstrative Project for BIM in Inner Mongolia Autonomous Region Demonstrative Project for Green Construction in Inner Mongolia Autonomous Region Demonstrative Project for Fine Management in Inner Mongolia Autonomous Region Demonstrative Construction Site for Building Construction Safety Standardization in Inner Mongolia Autonomous Region Demonstrative Project for Application of New Technologies in the Buildings and Construction Industry in Inner Mongolia Autonomous Region Demonstrative Project for Application of Smart Construction Site in Inner Mongolia Autonomous Region
1 Municipal Engineering Award	2020 Hohhot Construction and Installation Engineering Excellence Award
2 Design Awards	IDEA-KING Award for Annual Outstanding Landscape Design of The 10th International Landscape Planning and Design Competition APDC AWARDS 2020 Sales Center Honorable Award

The Project has participated in several exhibitions, including the 2021 China Building Science Conference in Tianjin, and "The Spirit of the Times Shines upon Hong Kong" Activity Series: Exhibition on Remarkable Construction in China, sponsored by the Hong Kong government, as the only shortlisted demonstrative project for ultra-low energy consumption building.

Figure 4-6 China Building Science Conference in Tianjin

Figure 4-7 "The Spirit of the Times Shines upon Hong Kong" Activity Series: Exhibition on Remarkable Construction in China

COGO'S UPPER EAST SIDE GREEN RESIDENCE

Located in Hefei City, COGO's Upper East Side Green Residence Project was a successful practice of reducing emissions through prefabricated technology and green energy saving technology for residential buildings. In the overall design, construction and research of the Project, COGO adopted an approach whereby green building design, prefabricated building design, healthy building design and residential carbon reduction research were carried out in parallel. Through this Project, COGO actively explored the linkage of green, healthy and low-carbon buildings, and obtained the label of healthy building and healthy community in addition to the green building pre-evaluation.

- This Project used prefabricated technology to reduce the waste of building materials and reduce carbon emissions in the transportation and construction of building materials through key processes of optimization of prefabricated shear walls and prefabricated bay windows, and prefabricated construction.
- In the operation of the buildings, green energy-saving technologies of high-efficiency air conditioning system, air-source heat pump hot water system, and energy-saving lighting system were used to achieve carbon reduction benefits.

The optimization design of the prefabricated technology adopted and the green energy-saving technologies in the building operation stage used in this Project jointly constitute a replicable, scalable and effective comprehensive solution for residential building emission reduction, which is the embodiment and practice of COGO, as a leading player in China's real estate industry, to join in low-carbon building technology innovation and zero-carbon development.

The Project has optimized energy-saving and emission-reduction measures in the four stages of prefabricated construction: schematic design, construction drawings splitting design, detailed design and construction administration, and shortened the construction period, reduced energy consumption and material waste mainly through key processes such as optimization of prefabricated shear walls and prefabricated bay windows, and prefabricated construction, and thus realized emission reduction in the residential construction stage. And the carbon emission in the operation stage of residential buildings was reduced by using green energy-saving technologies such as efficient VRV air conditioning systems, air-source heat pump water heating systems, and LED energy-saving lighting systems.

This Project is a successful practice of residential building project to explore the linkage of green, healthy and low-carbon buildings, and the key technologies and research results of the Project will provide design reference and practical guidance for the development of low-carbon residential buildings in China.

FEATURE 2 COGO'S UPPER EAST SIDE GREEN RESIDENCE

HEFEI | COGO'S UPPER EAST DISTRICT PROJECT

Demonstration project for green, healthy, and low-carbon residential clusters in hot summer and cold winter zones.

COGO's Upper East District Project, located in the north of the Fanhua Avenue in Hefei Economic Development Zone, with a total land use area of about 96,000 square meters and a total floor area of 268,000 square meters, is a medium and large residence project meeting three-star green building standards. In response to the call of China on energy conservation and carbon reduction, the Project applied prefabricated technology, a national advanced construction technology, implemented the relevant requirements of China on green energy conservation, and developed a set of effective, replicable and scalable energy conservation and carbon reduction measures. The Project mainly achieved emission reduction of residential buildings through prefabricated technology and green energy-saving technologies.

Prefabricated Technology

Green Energy-saving Technology

"LET'S EMBRACE LOW CARBON" SPECIAL CAMPAIGN

COGO has been practicing the spirit of "promoting frugality and diligent corporate management", and taking the initiative to assume social responsibilities of energy conservation and emission reduction. In 2022, COGO initiated the "Let's embrace low carbon" special campaign. This campaign involved over 60,000 individuals, including headquarters, regional companies, and upstream and downstream units. We focused on three main areas: procurement and operations, daily operations, and meetings and activities. We integrated the principles of "frugality and diligent corporate management" into daily business activities through intelligent transformation, specific practice initiatives, management measures, and excellent case summaries. This approach made low-carbon office work and green living a proactive choice for employees. Furthermore, we planned various themed activities, including the "Simplified Meeting Initiative," "One-week Low Carbon Meeting Challenge," centralized plan for hosting "Green Conference," "Exploring Paperless Office," and "Cherishing Food Special Action," among others.

In March 2022, we introduced the "Simplified Conference Initiative," which included specific measures aimed at, among others, reducing the number of meetings, clarifying participant roles, and improving communication prior to meetings, to achieve carbon emission reduction throughout the meetings. We also hosted a one-week "Low-Carbon Meeting Challenge" event, which challenged organizers and attendees to hold "the most efficient meetings while using the least amount of energy". We established requirements for both organizers and participants to encourage frugality and increase awareness of low-carbon office practices, while also promoting good habits for green meetings among all employees. In April 2022, we created a centralized plan for hosting "green conference" specifically for small and medium-sized meetings with 200 or less attendees, and developed a comprehensive green conference planning checklist centering on the location selection, accommodation, catering, transportation arrangements, and selection of materials, of the conference. We also carried out a "paperless office" themed campaign to build an efficient paperless office platform from electronic signature, online processes and paperless reporting based on current working scenarios. In October 2022, we launched the "Special Campaign to Stop Catering Waste", aiming to, through a series of publicity work, create an overall atmosphere of food conservation, and guide all employees of COGO to form food security awareness, and cultivate thrifty and healthy eating habits.

In an effort to promote "frugality and low-carbon office practices", COGO's headquarters and regional companies have prepared a special action plan for "frugality and low-carbon office practices", established a special action leading group, held a special action publicity meeting, completed internal online and offline publicity, and refined the implementation of specific requirements. By carrying out the "Let's embrace low carbon" among all employees, we are committed to promoting the low-carbon office concept throughout the production and operation processes. We continuously explored and innovated the "N possibilities of low carbon" in office work.

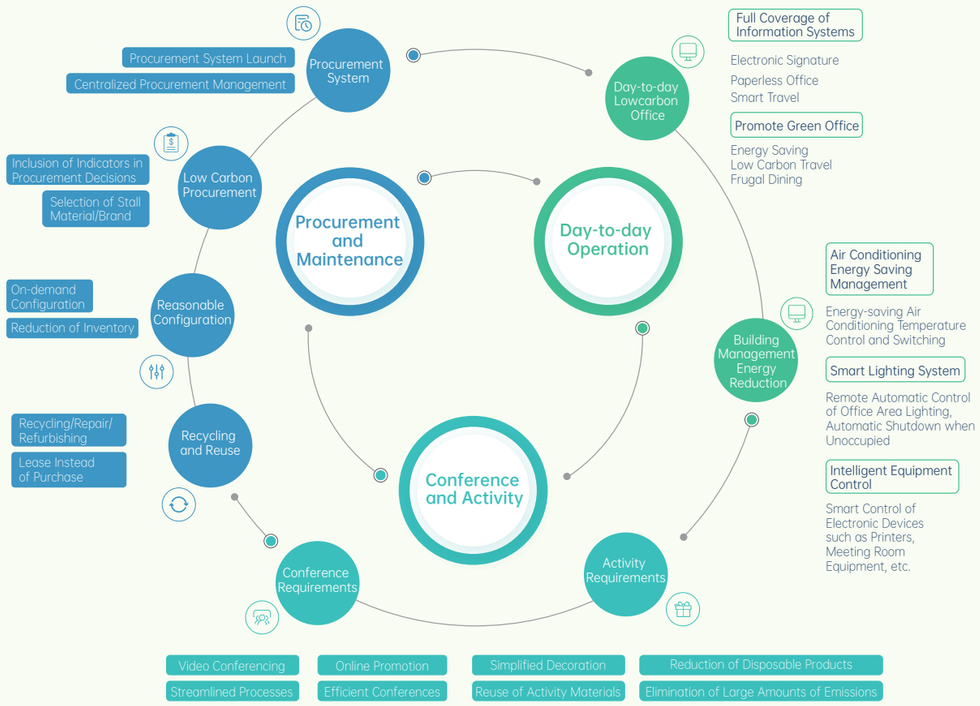


FIGURE 5-1 COGO'S Panorama "Let's embrace low carbon"

1 LOW CARBON MEETING

- Simplified Meeting Initiative
- One-week Low Carbon Meeting Challenge
- Centralized Plan for Hosting Green Meeting

2 PAPERLESS OFFICE

- Electronic Signature
- Online Processes
- Paperless Reporting

3 ZERO-CARBON TRAINING

- Online Training
- Simplified Decoration
- Paperless

4 STOPPING CATERING WASTE

- Food Security Awareness
- Improved Canteen Management
- Good Eating Habits Cultivation

05 Governance and Disclosure

GOVERNANCE FRAMEWORK

The Group has specially established a governance framework composing from top-down, Board of Directors of the Company, Executive Committee, ESG Leading Group and ESG Working Group, in order to ensure the achievement of its goals in carbon peaking, carbon neutrality, and environment, social and governance (ESG).

BOARD OF DIRECTORS

Regularly listen to the reports of the Executive Committee, actively participate in the formulation of green and low-carbon sustainable development strategies, and be responsible for the Group's sustainable development policies and information disclosure; be responsible for corporate risk management, judgment and assessment of opportunities and risks related to sustainable development; regularly report to and advise the Board members on matters related to sustainable development and carbon reduction, and provide feedback on sustainable development related issues.

EXECUTIVE COMMITTEE

Authorized by the Board of Directors to be responsible for sustainability-related matters and co-ordinate sustainable development operations; be responsible for formulating sustainable development and carbon reduction strategies and regularly reporting to the Board of Directors; be responsible for regularly conducting carbon risk identification and analysis, and review of carbon management procedures, and submitting audit results and improvement recommendations to the Board of Directors to determine the effectiveness of the carbon monitoring system; be responsible for monitoring the implementation of sustainable development in the daily work of each line of business.

ESG LEADING GROUP

Be responsible for the implementation of sustainable development and carbon reduction, ensuring that the carbon neutrality strategy work fully covers the entire Group; regularly report the progress of sustainable development work to the Committee, and prepare climate change information disclosure reports based on the implementation of carbon management goals.

ESG WORKING GROUP

Be responsible for the implementation and routine management of specific carbon management related matters in the projects; pay full attention to and implement the relevant requirements of the Group for green and low-carbon development in the process of daily business activities.

In order to scientifically manage the Company's carbon emissions at the organizational level and the carbon emissions of the whole life cycle of buildings, under the guidance of the ESG Leading Group, COGO will prepare to establish a carbon resource management platform for monitoring carbon emission activity data in all aspects of the Company, form a sustainable carbon management system by digital means, carry out closed-loop management of carbon emission data throughout the whole life cycle of buildings, connect with suppliers, realize the interoperability and sharing of carbon emission data in the value chain, and establish a solid data foundation and mechanism guarantee for COGO to attain the goal of carbon neutrality.

DISCLOSURE MECHANISM

To make the emission reduction goals open and transparent is not only to show stakeholders the determination and attitude of COGO to help the country achieve "carbon neutrality", but also to effectively supervise itself. This is the first White Paper on Carbon Neutrality released by COGO. In the future, we will disclose the progress of COGO's carbon neutrality to the public every year via our environmental, social and governance reports.

CONCLUSION

STAY TRUE TO THE ORIGINAL INTENTION OF BUSINESS HAPPINESS

We are committed to the happiness of property owners, setting a model of healthy and low-carbon development, and integrating sustainable development strategies into the Group's business philosophy. As a leader in the industry's implementation of the carbon peaking and carbon neutrality strategy, COGO applies ultra-low energy building technologies generally, actively implements green, low-carbon and healthy buildings, and coordinates excellent suppliers to act together, penetrate the low-carbon concept into the entire value chain of the industry, and jointly strengthen industry collaboration.

LOOKING FORWARD TO A LOW-CARBON AND HEALTHY FUTURE

We focus on low-carbon leadership under new urbanization and rural revitalization, and continue to create exemplary green and low-carbon benchmark projects. We are deeply committed to low-carbon and energy-saving technologies, practice corporate social responsibility, meet the yearning demand for a green, low-carbon and better life, enhance people's sense of happiness, and be a fulfiller of a green, low-carbon and better life. We will accelerate the pace of sustainable development and actively contribute to China's achievement of the carbon peaking and carbon neutrality goals.

APPENDIX

NOTES ON GHG ACCOUNTING

In order to ensure that the results of the inventory will be recognized by the intended users, this carbon inventory at organizational level was carried out in accordance with the International Standard ISO14064-1. This GHG inventory takes 2021 as the base year, covers the data period from January 1, 2021 to December 31, 2021, and only involves CO_2, CH_4, N_2O and HFCs.

Taking into account the technical feasibility, cost feasibility and the requirements of target customers, this inventory considered some emission sources of Category 3 & 4 and no emissions from Category 5 & 6. The threshold to exclude a source is 0.5%, with a total exclusion amount not exceeding 1% of the total emissions of the Organization.

The quantification methods used were the emission factor method and the mass balance method.

Note: The mass balance method is a special emission factor method.

(1) Emission factor method - fossil fuel combustion, purchased electricity, purchased heat:

GHG Emissions = Activity Data × Emission Factor

This method can be applied to emissions from mobile fossil fuel combustion (e.g. gasoline) and purchased electricity consumption.

Fossil fuel combustion emission activity data is measured by kg, while purchased electricity activity data is measured by kWh.

Note 1: Gasoline density: 0.775 kg/L, source: GB17930-2016, Table 2 Technical Requirements and Test Methods for Gasoline for Motor Vehicles (V) - Gasoline Density High Limit.

Note 2: Diesel density: 0.84 kg/L, source: GB19147-2016 National Standard for Automobile Diesel Fuels.

Note 3: The electricity emission factor is taken from the national average grid power emission factor of 0.5810 $kgCO_2/kWh$ in the Notice on the Key Work Related to the Management of Corporate GHG Emission Reporting in 2022.

Note 4: The thermal emission factor is taken from the recommended emission factor of 0.11 tCO_2/GJ in the Guidelines of the GHG Emissions Accounting and Reporting for Enterprises in Other Industrial Sectors (for Trial Implementation).

(2) Mass Balance Method - CO_2 fire extinguisher, R22, R32, R410A, R134a and other refrigerants:

GHG Emissions = Activity Data × GWP

The activity data is based on the new replenishment of CO_2 fire extinguishers and refrigerants for the year.

Note 1: The GWP values of GHG were taken from IPCC2021, as shown in the table below.

GHG Name	GWP	Source
CO_2	1	IPCC Sixth Assessment Report 2021.
CH_4	27.9	IPCC Sixth Assessment Report 2021.
N2O	273	IPCC Sixth Assessment Report 2021.
R22	1960	IPCC Sixth Assessment Report 2021.
R32	771	IPCC Sixth Assessment Report 2021.
R410A	2256	IPCC Sixth Assessment Report 2021.
R134a	1530	IPCC Sixth Assessment Report 2021.

THIRD PARTY VERIFICATION INFORMATION


温室气体排放核查声明

中国海外宏洋集团有限公司

CTI CNAS


温室气体排放核查声明附录

CTI CNAS

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