CEIBS

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CHINA DEPTH GLOBAL BREADTH

China Europe International Business School

Carbon Information Disclosure Report

中欧国际工商学院
CHINA EUROPE INTERNATIONAL BUSINESS SCHOOL

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院长寄语

MESSAGE FROM THE PRESIDENT

Image source: Shanghai Campus

Wang, Hong

CEIBS President; Professor of Management;
Hengdian Group Chair in Management;
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Recipient of the Special Government Allowance of the State Council

From the towering mountains to the depths of the ocean, the impacts of climate change persistently reverberate across every corner of our planet. Faced with the escalating threat of climate change driven by soaring greenhouse gas emissions, the Paris Agreement emerged as a testament to the ambitious goal of limiting global warming to within 1.5 degrees Celsius. However, the Global Climate Status Report of 2022, released by the World Meteorological Organization, paints a stark picture. Heatwaves, droughts, and floods continue to afflict continents to varying degrees. The extent of Antarctic sea ice has reached record lows, and the unprecedented melting of glaciers in certain regions of Europe serves as a sobering reminder. People around the world endure the ongoing impacts of extreme weather events and climatic disruptions.

Embracing the profound sense of duty, assuming responsibility, and translating intentions into action, China has emerged as a vanguard in addressing the global challenge of climate change. With utmost sincerity, China has made a solemn commitment to achieve carbon peaking by 2030 and carbon neutrality by 2060. This resolute pledge not only showcases China's role as a responsible major nation in advancing the construction of a shared future for humanity but also exemplifies its grand vision as a participant, contributor, and leader in the global pursuit of ecological civilization. Simultaneously, the Chinese government has structured a '1+N' policy framework, meticulously outlining the roadmap for economic and social development under the dual carbon objectives. These visionary policies serve as a compass, guiding the nation's steady and accelerated transition towards a green economy.

Born out of the shared pursuit of cooperation and mutual benefit between China and the European Union, CEIBS embarked on its transformative journey twenty-nine years ago. Guided by the motto of 'Conscientiousness, Innovation and Excellence', CEIBS has dedicated itself to nurturing visionary business leaders who possess an unrivalled blend of China's profound insights and a truly global perspective. Today, CEIBS stands as a beacon of academic eminence, boasting a global footprint that spans three continents which encompasses five prestigious locations, and has seamlessly evolved into Asia's premier business school, firmly cementing the role as a steadfast bridge between China and the world. As CEIBS forges ahead, it remains steadfastly committed to integrating the concept of sustainable development into education, research, and daily operations, leading the way in environmental awareness, emphasizing energy management, and actively building a green campus.

As the CEIBS approaches the milestone age, a profound sense of duty weighs heavily upon shoulders. Confronted with the dire repercussions of global climate change and situated within the backdrop of China's steadfast commitment to the dual carbon goals, CEIBS embraces the undeniable responsibility and mission to champion sustainable development and drive the transition to a low-carbon future. In pursuit of this mission, this year in 2023, CEIBS actively initiated Carbon Neutrality Strategy, conducting greenhouse gas emission accounting of year2019 and 2021. Based on the emission data of base year 2019, CEIBS solemnly commits to achieving Scope 1 and Scope 2 carbon neutrality by 2035 and achieving carbon neutrality in all scopes by 2050. To chart a clear path towards this goal, CEIBS employs a multifaceted approach encompassing technological innovation, energy management, and resource utilization. A decarbonization roadmap is developed to ensure a methodical progression towards its carbon neutrality targets.

This Carbon Information Disclosure Report aims to convey the efforts and commitments of CEIBS towards achieving carbon neutrality. We firmly believe that transparent disclosure and open communication are vital steps in driving decarbonization and facilitating the transition to a low-carbon future. CEIBS remains steadfast in its commitment, continuously striving to create a cleaner and more sustainable world for the future. We also look forward to forging a new chapter in sustainable development together with all stakeholders!

概况
OVERVIEW

Image source: Shanghai Campus

About this Report

▪ Aim of the Report

This report is the first Carbon Information Disclosure Report published by China Europe International Business School (CEIBS) (thereafter referred to as "CEIBS", "the School" or "we"), which comprehensively describes the philosophy and practice of CEIBS in contributing to the national "carbon peaking & carbon neutrality" goal, announces the carbon neutrality target and action plan, and reports on the progress of greenhouse gas emissions and decarbonization Measures.

Guiding Principles

To fulfil the commitment of carbon neutrality, the road may be challenging, but goal will be achieved through action. Throughout the journey, CEIBS adheres to the guiding principles of "environmental sustainability, educational empowerment, and community engagement." These principles serve as the foundation for planning and implementing actions in a systematic, high-quality, and effective manner, turning the goals into success.

▪ Environmental Sustainability

We are dedicated to exploring a low-carbon development path for business schools through sustainable operational practices. Since its establishment, CEIBS has prioritized energy conservation and environmental protection in daily operation, continuously accelerating decarbonization through meticulous energy management. In this strategic initiative, we have developed comprehensive decarbonization strategies, aiming to enhance energy efficiency through the implementation of intelligent energy management systems, energy-saving equipment, and other measures to reduce our carbon emission and minimize environmental impact. Furthermore, CEIBS intends to actively explore diverse decarbonization methods, such as the application of new energy sources and carbon offsetting, contributing to the global effort to address climate change. We will consistently conduct periodic monitoring and assessment of our carbon management performance, benchmarking it against international standards and best practices, to enhance our own carbon management proficiency and capacity.

▪ Educational Empowerment

We are dedicated to driving action on climate change through educational activities. As advocates of business values and leaders in responsible education, CEIBS will continue to advance green campus initiatives and promote sustainable practices, spreading the influence of environmental consciousness. Additionally, we will develop carbon neutrality and ESG-related case studies, establish a comprehensive curriculum on sustainable development, and cultivate business leaders and managers with ESG awareness and competencies. We also plan to conduct specialized research, publish academic achievements, and contribute high-quality knowledge to society on topics such as carbon neutrality, climate change, and sustainable development.

▪ Community Engagement

We are dedicated to making the business school a pioneer in urban green transformation and a key driver of integrated industry-academia-research collaboration, empowering regional green development, and enhancing our social contribution through education. We have built strong partnerships and networks with government, corporations, non-profit organizations, and other stakeholders, working together to advance carbon governance and transition in society.

Through supporting green entrepreneurship, participating in philanthropic activities, and promoting green lifestyles, we aim to co-create a green and harmonious community with local residents. Additionally, CEIBS actively responds to national and local decarbonization policies and targets, engages with international organizations and initiatives, and utilizes our influence to mobilize collective action in tackling climate risks at the community level.

Carbon Neutrality Commitment

We put forward ambitious and traceable carbon neutrality targets with clear reduction timelines for scope1/2 and scope3. We aim to achieve carbon neutrality ahead of national target, and convey our philosophy and determination to all stakeholders about addressing climate change.

CEIBS commits to achieving Scope 1 and Scope 2 carbon neutrality by 2035 and achieving carbon neutrality in all scopes by 2050. This commitment is underpinned by scrupulous greenhouse gas emission accounting, robust decarbonization trajectory projections, and rigorous feasibility analyses of decarbonization measures.

Our commitment is a response to the increasingly urgent global call to address climate change, a firm commitment to China's "30·60" carbon goals, and a direct response to the concerns of stakeholders regarding environmental sustainability. It embodies CEIBS's leading example of setting a precedent and fulfilling our obligations. This commitment, as a milestone declaration marking the official initiation of our carbon neutrality journey, signifies our determination to advance responsibly on the path of decarbonization.

Carbon Emission Information Overview

CEIBS has set the year 2019 as the base year, while carefully selecting 2021 as the year for tracking as it represents a period of consistent operational activities. This rigorous methodology aims to provide a comprehensive understanding of the greenhouse gas emissions data of CEIBS.

In 2019, the total emissions of Scope 1, Scope 2 and part of Scope 3 of CEIBS (five campuses in total) was 9,977.29 tCO_2e. In 2021, the total emissions of Scope 1, Scope 2 and part of Scope 3 of CEIBS was 9,515.13 tCO_2e. The total emissions and the proportion of each emission scope is shown in Figures 1 and 2.

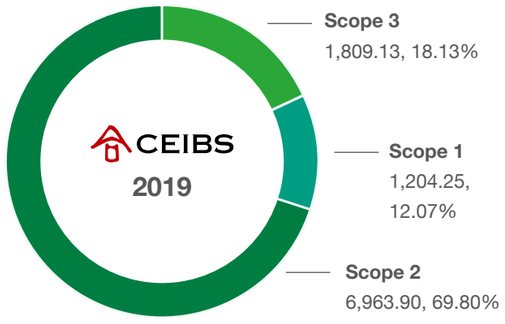

Figure 1: Greenhouse gas emissions of CEIBS in 2019 (Unit: tCO_2e)

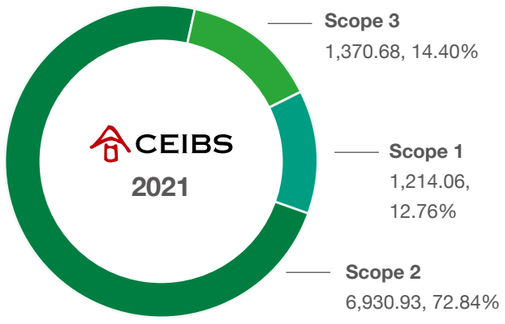

Figure 2: Greenhouse gas emissions of CEIBS in 2021 (Unit: tCO_2e)

The total Scope 1, Scope 2 and part of Scope 3 emissions from each of the CEIBS campuses, and the proportion of emissions from each campus to the total emissions from CEIBS in 2019 and 2021 are shown in Figures 3 and 4.

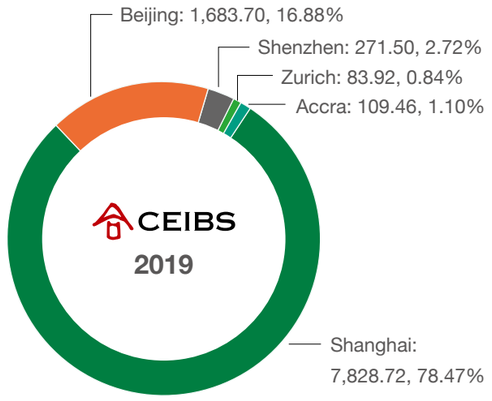

Figure 3: CEIBS's five campuses'2019 GHG emissions (Unit: tCO_2e)

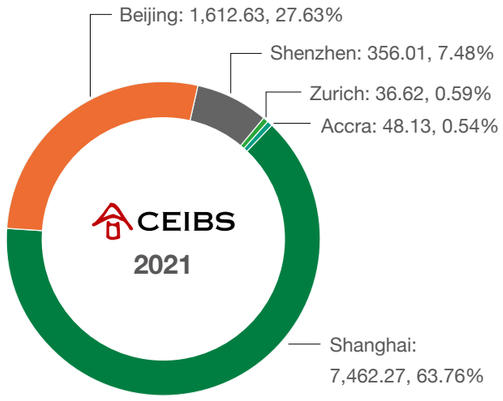

Figure 4: CEIBS's five campuses'2021 GHG emissions (Unit: tCO_2e)

The implementation of CEIBS's carbon neutrality strategy exhibits the following characteristics:

▪ Conducting comprehensive carbon emission accounting

Conducting accounting for the base year (2019) and the tracking year (2021) to clarify the greenhouse gas emission data across all scopes and campuses, establishing a solid foundation for taking actions to achieve carbon neutrality.

▪ Developing multidimensional decarbonization project planning

Utilizing various methods, including modelling simulations, in-depth interviews, and technical analyses, to develop practical decarbonization action plans. Through thorough analysis of decarbonization potential and cost implications, we established carbon neutrality targets that demonstrate our commitment to addressing climate change.

▪ Incorporating suggestions from various stakeholders through multiple channels

By engaging in interactive sessions with students and conducting surveys among faculty and staff, we have innovatively incorporated the demands and viewpoints from students and other stakeholders on green development and work together to build a green and low-carbon campus.

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CARBON EMISSION INFORMATION

Image source: Zurich, Switzerland Campus

We adopted international carbon accounting methodologies, scientifically set 2019 as the base year for carbon emissions, and further carried out a tracking assessment for 2021, striving to present the whole picture of CEIBS's carbon inventory in a rigorous, objective and accurate manner, and build the starting point and cornerstone for the pathway of CEIBS's carbon neutrality strategy.

Carbon Accounting Methodology and Scopes

▪ Reference Standards

In the process of conducting carbon accounting, CEIBS has employed a methodological approach that draws on various reference documents and standards. These include the 2019 Refinement to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories, The GHG Protocol: A Corporate Accounting and Reporting Standard (Revised Edition 2011), and Technical Guidance for Calculating Scope 3 Emissions. Regarding the compilation of the accounting report, CEIBS mainly referred to the Greenhouse gases - Part 1: Specification with guidance at the organization level for quantification and reporting of greenhouse gas emissions and removals (ISO 14064-1:2018). The selection of emission factors is based on generally acknowledged IPCC-related documents and authoritative documentations published by national government. Throughout the carbon accounting process, strict adherence is maintained to the principles of importance and the requirements for data quality assurance.

▪ Organizational Boundary

Based on ISO 14064-1:2018, CEIBS has established the organizational boundary by adopting the "operational control approach", taking into account its own operational context. In accordance with the aforementioned principles, the carbon accounting conducted for the years 2019 and 2021 encompasses CEIBS' five campuses: Shanghai Campus, Beijing Campus, Shenzhen Campus, Zurich Campus, and Accra Campus.

▪ Reporting Period

In accordance with the reference standards, we conducted a horizontal comparison of the offline teaching hours of CEIBS from 2019 to 2022. Taking into account various factors such as personnel activities and class schedules, we selected 2019 as the base year for the carbon accounting. Building upon this foundation, we chose 2021 as the year for tracking and evaluating greenhouse gas emissions.

The period of time covered by the two carbon accounting in this report are as follows:
·Base Year: January 1, 2019 to December 31, 2019 (representing a year unaffected by the pandemic in terms of personnel activities)
·Tracking Year: January 1, 2021 to December 31, 2021 (representing a year with minimal impact on personnel activities due to the pandemic within the most recent three years)

▪ Scope of Emissions

The base year and the tracking year carbon accounting conducted by CEIBS cover Scope 1 direct greenhouse gas emissions, Scope 2 indirect emissions from imported energy sources, and Scope 3 emissions resulting from employee commuting, business travel, purchased paper, and waste generated within the organizational boundary.

Table 1: Emission Scopes and Definitions

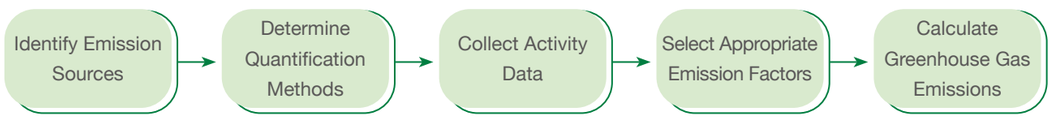
Scope	Sources	Definition
Scope 1: Direct greenhouse gas emissions	Stationary Combustion	Greenhouse gas emissions from the combustion of fossil fuels in stationary equipment.
	Mobile Combustion	Greenhouse gas emissions from the combustion of fossil fuels in mobile equipment.
	Fugitive Emissions	Greenhouse gas emissions from facility and equipment leaks and fugitive emissions.
Scope 2: Indirect greenhouse gas emissions generated from imported energy source	Purchased electricity	Greenhouse gas emissions from purchased electricity within the organizational boundary.
Scope 3: Indirect emissions from the supply chain (upstream and downstream)	Employee commuting	Greenhouse gas emissions from transportation of employees between their home and worksites.
	Business travel	Greenhouse gas emissions from business-related activities, including emissions from airplanes, trains, taxis, and other modes of transportation.
	Purchased paper	Greenhouse gas emissions associated with purchased paper.
	Waste generated in operation	Greenhouse gas emissions from the disposal and treatment of waste generated in the operation.

Both rounds of the carbon accounting cover the seven greenhouse gases required to be reported according to ISO 14064-1: 2018. These gases include carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), nitrogen trifluoride (NF_3), sulfur hexafluoride (SF_6), hydrofluorocarbons (HFCs), and perfluorocarbons (PFCs). Upon verification, emissions sources within our operational boundary include four categories of greenhouse gases: CO_2, CH_4, N_2O, and HFCs.

▪ Carbon Accounting Process

Both the 2019 and 2021 accountings followed the following steps:

Figure 5: Carbon Accounting Process of CEIBS



▪ Reliability Statement

The greenhouse gas emissions data for Scope 1 and Scope 2 of CEIBS have undergone rigorous independent third-party verification. The verification party has issued an unqualified opinion, stating that the reported data and information accurately represents CEIBS' greenhouse gas emissions and is supported by sufficient and appropriate evidence.

CEIBS affirms that this report contains no falsified or misleading information. CEIBS takes full responsibility for the authenticity, accuracy, and completeness of the contents presented.

Carbon Emissions of Different Scopes

Scope 1 Emissions

Scope 1 emissions come from direct emissions within the CEIBS organizational boundary, including emissions from the combustion of natural gas and diesel fuel from stationary equipment, emissions from the combustion of gasoline and diesel fuel from mobile equipment, and fugitive emissions from refrigeration equipment and air conditioners, fire extinguishers, and domestic sewage treatment facilities.

Table 2: Scope 1 Direct Greenhouse Gas Emission Sources

Sources	Emission Equipment	Fuel/Refrigerant Category	GHG Generated	2019 Emission (tCO_2e)	2021 Emission (tCO_2e)
Stationary combustion	Direct-fired engine, kitchen stove	Natural gas	CO_2、CH_4、N_2O	705.48	698.19
	Heating equipment, electricity generator	Diesel	CO_2、CH_4、N_2O	44.46	31.26
Mobile combustion	Owned and leased vehicles	Gasoline	CO_2、CH_4、N_2O	96.01	84.55
	Lawn mower	Diesel	CO_2、CH_4、N_2O	0.06	0.08
Fugitive emissions	Refrigeration equipment and air conditioners	R410A, R22[1], R23, R32, R407C, R134a, R600a[2], R290[2], R401a, R452a, R404a	HFCs	240.08	282.58
	Fire extinguisher	/	CO_2、HFCs	46.37	49.83
	Septic tank	/	CH_4	71.80	67.59
Total				1,204.25	1,214.06

**Note: [1] According to the "Montreal Protocol on Substances that Deplete the Ozone Layer" and the "Controlled Ozone Depleting Substances List of China", the gradual reduction and elimination of R22 is required. Therefore, it is not included in the carbon accounting. [2] The IPCC Fifth Assessment Report and the Sixth Assessment Report do not provide Global Warming Potential (GWP) values for R600a and R290. Therefore, they are not included in the carbon accounting by CEIBS.*

Based on the table above, the total Scope 1 emissions for CEIBS in 2019 were 1,204.25 tCO_2e. And in 2021, the total emissions were 1,214.06 tCO_2e.

Scope 2 Emissions

The purchased energy for the five campuses of CEIBS is exclusively electricity. The greenhouse gas emissions generated from the purchased electricity of CEIBS in 2019 and 2021 are shown in the table below.

Table 3: Scope 2 Indirect Greenhouse Gas Emission Sources

Sources	GHG Generated	2019 Emissions (tCO_2e)	2021 Emissions (tCO_2e)
Purchased electricity	CO_2	6,963.90	6,930.93

Scope 3 Emissions

According to the definition of the GHG Protocol, Scope 3 covers a total of 15 emission categories along the supply chain. Considering the emission categories and data availability relevant to CEIBS, the following categories were included in the carbon accounting for the years 2019 and 2021: business travel, employee commuting, purchased paper, and waste generated in operations. The quantified emissions for these four categories within Scope 3 are presented in the table below.

Table 4: Screened Categories of Scope 3 Emissions

Sources	GHG Generated	2019 Emissions (tCO_2e)	2021 Emissions (tCO_2e)
Category 1: purchased goods and services	CO_2	89.30	84.56
Category 5: waste generated in operations	CO_2	573.75	489.36
Category 6: business travel	CO_2、CH_4、N_2O	539.78	361.15
Category 7: employee commuting	CO_2、CH_4、N_2O	606.31	435.61
Total		1,809.13	1,370.68

Based on the table above, the total Scope 3 emissions for selected categories of CEIBS in 2019 were 1,809.13 tCO_2e, while in 2021, the total emissions were 1,370.68 tCO_2e.

Summary of Full Scope Carbon Emissions

According to the above results, the total greenhouse gas emissions of CEIBS in 2019 was 9,977.29 tCO_2e, and the total greenhouse gas emissions in 2021 was 9,515.13 tCO_2e. Compared to 2019, there was a 4.63% decrease in total greenhouse gas emissions in 2021.

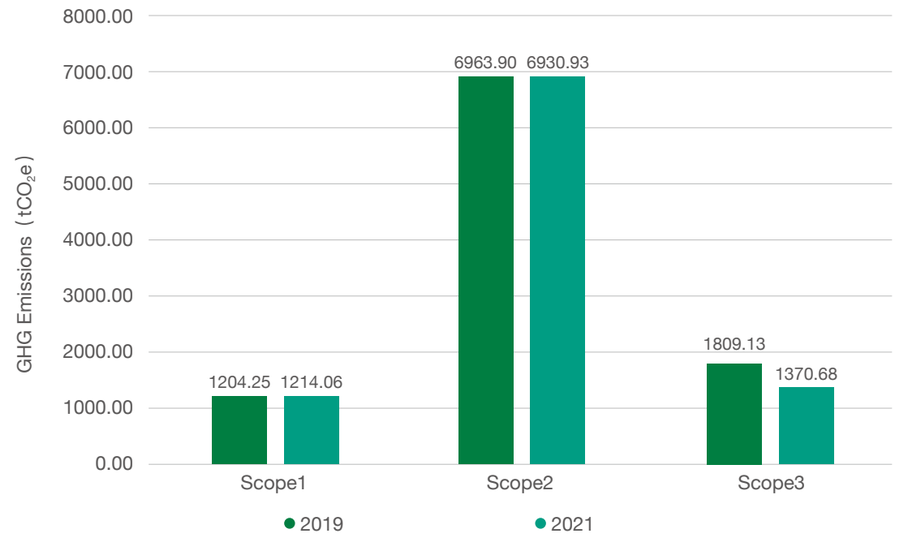
Compared to 2019, the 2021 year's data indicated that Scope 1 emissions has increased by 9.81 tCO_2e, Scope 2 emissions has decreased by 32.97 tCO_2e, and Scope 3 emissions has decreased by 438.45 tCO_2e.The reasons for the gap are reported as follows:

· Scope 1 Emissions: CEIBS was subject to a relative reduction in in-person human activities as influenced by the epidemic in 2021, so greenhouse gas emissions from natural gas, gasoline and diesel consumption decreased, and septic tank fugitive emissions associated with human activities decreased in parallel. The increase in fugitive greenhouse gas emissions from refrigerants and fire extinguishers was the main reason for the increase in Scope 1 emissions in 2021. When conducting the base year carbon accounting, the global warming potential (GWP) values published in the IPCC's Fifth Assessment Report were applied considering that the IPCC's Sixth Assessment Report had not yet been released in 2019. The GWP values used for the 2021 carbon accounting were derived from the updated values in the IPCC's Sixth Assessment Report which were generally higher than those published in the IPCC's Fifth Assessment Report. As a result, there was a significant increase in HFCs gas emissions in 2021 even with an essentially the same equipment using refrigerants and fire extinguishers, offsetting the emission reduction trends from other sources.

· Scope 2 Emissions: After the impact of the epidemic gradually waned in the second half of 2021, CEIBS increased its offline courses and activity arrangements, especially the Shanghai campus carried out a certain period of concentrated remedial courses. At the same time, the grid emission factors in China, Switzerland and Ghana all decreased in 2021 compared to 2019. The interaction of the two factors results in only a small decrease in total greenhouse gas emissions from purchased electricity in CEIBS in 2021. Purchased electricity emissions, as a major contributor of greenhouse gases for CEIBS, is an important focus for future decarbonization efforts.

· Scope 3 Emissions: Under the influence of the epidemic, greenhouse gas emissions generated by each of the Scope 3 categories decreased, and the total Scope 3 emissions had decreased by 32%. The decrease is mainly due to the reduction of travel activities in 2021. In the future, with the gradual recovery of personnel activities and the improvement of statistical accuracy of Scope 3 data, Scope 3 emissions will be presented more comprehensively in future reports.

Figure 6: Comparison of CEIBS GHG Emissions in 2019 and 2021



**Note: Scope 3 data includes: Category1, 5, 6 and 7, CEIBS will continue to improve Scope 3's data collection and accounting work in the follow-up action and enhance Scope 3 data completeness*

Image source: Beijing Campus

减碳措施与行动计划

DECARBONIZATION MEASURES AND ACTION PLAN

Image source: Shenzhen Campus

On the basis of the preliminary achievements in constructing a green campus, CEIBS is reinforcing the strategic position of carbon neutrality with greater determination and clearer strategies. We have developed a clear roadmap towards carbon reduction, and identify the short term, medium and long term action plans. We have been integrating engineering and management measures, quantifying the carbon reduction effect in every stage, and taking actions to advance the achievement of carbon neutrality.

Energy Efficiency and Decarbonization Measures

Since its establishment, CEIBS has been actively committed to building a green campus, assuming environmental responsibilities, responding to energy-saving initiatives, and emphasizing green and low-carbon development. CEIBS has already achieved a series of accomplishments in reducing energy consumption, improving energy and water resource efficiency, and utilizing renewable energy. With the implementation of comprehensive decarbonization actions, CEIBS will continue to strengthen the optimization and upgrading of existing practices.

Table 5: Status of Energy-saving and Decarbonization Measures

Decarbonization strategy		Description
Reduce Energy Usage	Sun Shading	CEIBS incorporated energy-saving concepts into the design and construction of its campuses. Both the Shanghai and Beijing campuses have implemented internal and external shading measures. In the Beijing campus, horizontal external shading is utilized, and the main functional areas are equipped with internal shading roller blinds. Some building facades are also equipped with glass thermal insulation films. On the other hand, the Shanghai campus utilizes both perforated external shading and horizontal external shading, and the main functional areas are equipped with internal shading roller blinds. These measures significantly reduce solar heat gain during the summer months.
	Natural ventilation	In most classrooms and meeting rooms in the Beijing and Shanghai campuses, natural ventilation is maximized by incorporating manually operable windows. Manual opening windows are installed to facilitate natural airflow. During the transitional seasons (March/April and September/October), efforts are made to utilize natural ventilation as much as possible, reducing the reliance on air conditioning.
	Optimized lighting	In the Beijing campus, energy-saving measures have been implemented by turning off 2/3 of the garage lighting circuits during the night. In the Shanghai campus, low-power standby lighting fixtures are used, which are equipped with sensors to provide localized illumination when people or vehicles approach, thus reducing lighting energy consumption.

Improve Energy Use Efficiency	Heat recovery	The Shanghai campus utilizes the heat recovery function of air-source heat pumps to recover the heat that is normally expelled to the outdoors from air conditioning units. This recovered heat, known as waste heat, is then used to heat water through a secondary process, reducing the operating pressure of the air conditioning equipment and decreasing energy consumption by 10-15%.
	Upgrading of light fixtures	The Beijing and Shanghai campuses has initiated the LED lighting retrofit project in 2019. As part of this project, a planned replacement of old lighting fixtures with energy-efficient LED fixtures has been carried out, taking into consideration their service life. This process will continue until all fixtures have been upgraded to LED, ensuring a complete transformation towards energy-saving lighting solutions.
	Smart metering	Since 2019, the Shanghai campus has commenced the replacement of energy meters with smart meters, allowing for efficient collection and analysis of electricity usage data. Through the utilization of long-term and large-scale data analysis, energy-saving potentials are identified, enabling the optimization of electricity consumption practices. This initiative aims to enhance energy efficiency and promote sustainable energy management at the campus.
Improve Water Use Efficiency	Water reuse	To enhance water resource utilization efficiency, the Shanghai campus has implemented a system for wastewater treatment and water reuse. This system incorporates a campus landscape water pool as a buffer tank, enabling the complete reuse of domestic wastewater. The core technology utilized in this system is the "membrane-bio reactor," which is an excellent application resulting from the conversion of scientific and technological achievements under the National High-Tech Research and Development Program (863 Program). CEIBS has been recognized by the Shanghai Water Authority and the Shanghai Education Commission as a "Shanghai Model School for Water Conservation."
Use Renewable Energy	Rooftop photovoltaic	The Zurich campus has installed solar panels to generate solar energy for self-consumption.

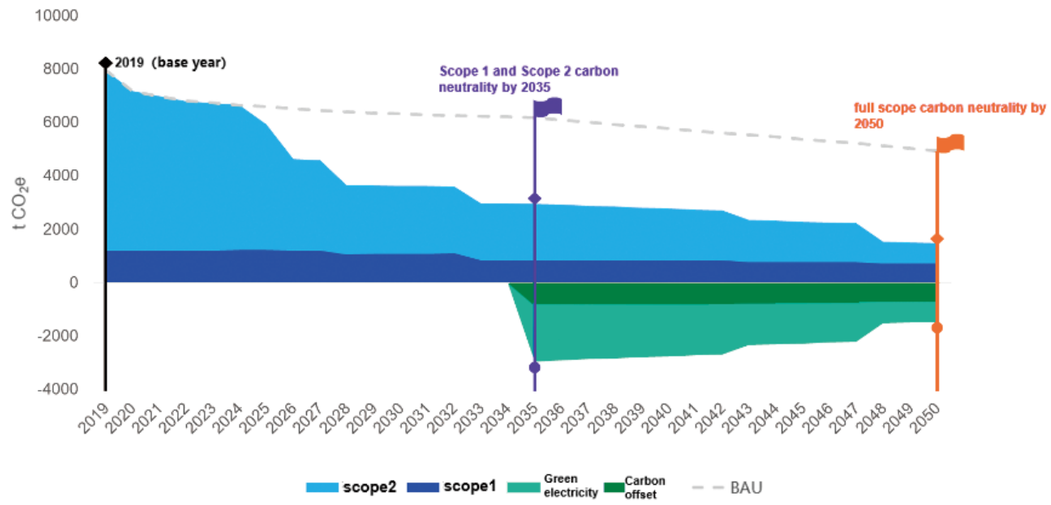
Building low-carbon and energy-efficient campus buildings is a key driver for CEIBS to achieve carbon neutrality. In 2013, the student dormitories and CEIBS Shanghai campus (Phase 3) were awarded the Gold Certification of Leadership in Energy & Environmental Design (LEED), recognizing CEIBS' initiatives in the field of green buildings and environmentally friendly design. CEIBS will continue to improve energy efficiency for campus buildings. Additionally, in 2022, CEIBS Shanghai campus initiated the “Smart Campus” project, laying a solid foundation for more accurate measures and control of campus energy consumption in the future. CEIBS will strive to integrate sustainable development principles throughout all stages of its operations, continuously reducing environmental impact and energy consumption levels, and achieving a sustained improvement in the future low-carbon development.

Carbon Neutrality Pathway and Action Plan

To ensure and promote the successful achievement of the goal of "achieving carbon neutrality in Scope 1 and Scope 2 emissions by 2035, and achieving carbon neutrality in all scopes by 2050", CEIBS has conducted rigorous assessments of the current situation, analysed decarbonization potentials, and estimated investment costs. Based on these, CEIBS has developed a roadmap for decarbonization actions. The decarbonization strategy of CEIBS encompasses multiple measures including direct emission reduction measures, clean energy utilization, and carbon offset applications. Adhering to the principle of prioritizing direct emissions reduction measures, CEIBS has been continuously implementing a comprehensive and multidimensional decarbonization framework and management system, aiming to make efficient and steady progress towards the established carbon neutrality goals, and leading the way in green and low-carbon development of the campuses.

In this report, we have plotted a carbon neutrality pathway for CEIBS based on the 2019 emission data of Scope 1 and Scope 2 from the Beijing, Shanghai, Zurich, and Accra campuses and CEIBS' future development.

Figure 7: Schematic Diagram of the Carbon Neutrality Pathway for Scope 1 and Scope 2 Emissions of CEIBS [1][2]



** Note: [1] The Shenzhen campus is currently undergoing relocation and thus not included in the carbon neutrality pathway.*
[2] BAU stands for "Business as Usual," which represents the baseline scenario assuming no energy-saving or emission reduction measures are taken by CEIBS campuses. It relies solely on the decrease in grid emission factors resulting from an increased proportion of renewable energy in the grid for future emission projections.

CEIBS adopts a comprehensive, reliable, and rigorous approach to make efforts towards achieving carbon neutrality. For the key campuses-Beijing and Shanghai, the following steps are taken to form an action plan:

Comprehensive on-site survey of existing buildings, facilities and equipment to identify issues of high energy consumption and low energy efficiency. In-depth investigation was conducted to understand the underlying causes and explore opportunities for improvement, resulting in a list of energy-saving and emission reduction potentials.

Further industry and market research was carried out to understand the characteristics and applications of mature technologies. Requirement of performance indicators for advanced energy-saving technologies were analysed. Diverse improvement strategies were proposed for the identified potentials with careful consideration on their effectiveness and suitability for CEIBS' specific situations. The technical parameters of software and hardware and expected outcomes of the strategies were clearly defined.

The decarbonization potential of different improvement strategies was evaluated. Detailed calculations were performed to obtain the carbon emission reduction and the percentage of reduction relative to the base year after implementing the measures. The composition of costs of each measure was assessed through market research and price inquiries, the overall investment was estimated and the cost-effectiveness of the measures was evaluated.

Based on a multidimensional analysis of actual needs, decarbonization potential, and economic benefits, CEIBS has developed short-term (three-year), medium-term, and long-term action plans to achieve carbon neutrality:

In terms of engineering measures, efforts have been focused on reducing energy demand, improving energy efficiency, and promoting the use of renewable energy. On one hand, existing campus buildings' energy consumption losses will be reduced through the maintenance, repair, and upgrading of heat-insulating films and insulation materials. On the other hand, energy efficiency will be enhanced through the energy-saving transformation of electrical and HVAC equipment, which are major energy contributors on campus. Additionally, renewable energy sources such as rooftop photovoltaics will be utilized to achieve maximum self-reduction in carbon emissions.

In terms of management measures, a series of management plans including the promotion of green transportation alternatives like high-speed rail, subway, and buses, paperless offices, textbook recycling, responsible procurement, responsible investment, and internal carbon pricing, will be implemented to achieve resource recycling and significant reduction in carbon emissions, especially in Scope 3 emissions.

Furthermore, by gradually optimizing the energy management system and integrating smart campus data, detailed information on various energy consumption metrics will be captured to enable regular tracking of energy efficiency indicators and in-depth analysis of energy consumption comparisons. Based on this, evaluation and analysis of the implementation effects of various measures could be conducted, and the action plans will be periodically optimized and adjusted.

In addition to taking proactive measures, CEIBS will also expand its low-carbon influence and strengthen the promotion of green and low-carbon awareness and education by offering more ESG courses, conducting academic research on carbon neutrality and ESG-related topics, and engaging in communications and collaborations with management departments, research institutions, alumni, and other stakeholders.

Action Plan for the Next 3 Years (2024-2026)

Every journey begins with a single step. Based upon the comprehensive development of an action plan, CEIBS has further clarified its specific energy-saving and decarbonization action plan for the next three years. Starting from the macro perspective and addressing the micro details, the "decarbonization" gene has been integrated into the campus engineering transformation.

The Beijing and Shanghai campuses, which account for over 90% of CEIBS's total carbon emissions, serve as the vanguards for energy-saving and decarbonization efforts. Over the next three years, the School will focus on implementing a series of decarbonization projects on Beijing and Shanghai campuses, leveraging existing strategies while adapting to local conditions and timing. Additionally, CEIBS will concurrently promote decarbonization initiatives across all five campuses. The specific action plan is shown in the table below.

Image source: Africa Accra Campus

Table 6: Action Plan and Expected Decarbonization Effectiveness

Action	Action pathway	Expected decarbonization effectiveness*
Enhance the performance of glass curtain walls and door-window systems	Reducing carbon emissions from cooling and heating energy consumption by adding glass thermal insulation films and installing new types of glass with lower thermal conductivity.	Compared to the base year, the Beijing campus is expected to reduce its annual carbon emissions by 11%, while the Shanghai campus is projected to reduce its annual carbon emissions by nearly 5%.
Reduce lighting power density	A comprehensive energy-saving solution will be implemented for areas with high lighting power density, such as libraries, public areas, and classrooms. Gradual implementation of renovation plans for each space will involve the use of more efficient lighting fixtures throughout the lighting system, significantly improving energy efficiency and lifespan.	Compared to the base year, the Beijing campus is expected to reduce its annual carbon emissions by 2%, while the Shanghai campus is projected to reduce its annual carbon emissions by nearly 13%.
Enhance lighting system controls	Natural light sensors and occupancy sensors will be installed in the exterior areas of the building (utilizing natural daylight) and non-critical areas with limited human activity, respectively. These sensors will allow the lighting fixtures within the controlled areas to be in standby mode when there is sufficient natural light or no human activity, reducing the duration of lighting system usage and consequently reducing electricity consumption.	Compared to the base year, the Beijing campus is expected to reduce its annual carbon emissions by nearly 5%, while the Shanghai campus is projected to reduce its annual carbon emissions by nearly 2%.
Gradually implement Scope 3 data system	CEIBS is continuously expanding the scope of data collection for Scope 3 emissions, identifying decarbonization potentials, and making timely adjustments. This proactive approach aims to optimize the management of Scope 3 emissions and contribute to overall decarbonization efforts.	Continuous assessment
Engage in green initiatives	We reduce our carbon emission by adopting paperless office practices and implementing green commuting solutions.	Continuous assessment
Establish a green supplier management system	By implementing a green supplier management system, we aim to reduce carbon emissions in our supply chain.	Continuous assessment

** Note: The reduction in carbon emissions is calculated based on the assumption that all engineering projects have been fully implemented.*

SUMMARY

This report is the first showcase of CEIBS' carbon information and serves as our firm commitment to the mission of carbon neutrality. In the context of unprecedented global challenges and opportunities brought by the great transformation of the century, as well as the complex and severe domestic and international political, economic, and climate change situations, China has always upheld its responsibilities as a major nation, promoting the construction of a community with a shared future for mankind and working towards global sustainable development. CEIBS, in line with its commitment to serving the country and addressing the issues of the times, is taking concrete actions to establish a practical paradigm and impart a green impact.

Facing new challenges, we bravely undertake the new mission. Envisioning the future, CEIBS will relentlessly pursue decarbonization measures, continuously improving carbon management levels, and diminishing our carbon footprint. We will diligently assess and appraise the progress of our carbon-related endeavors. Gazing into the future with resolute determination, we march forward on the path to carbon neutrality, ensuring tangible strides. Meanwhile, CEIBS will continue to enhance collaboration and communication with all stakeholders, working together to advance the agenda of decarbonization and jointly address climate risks. We will strive to achieve a new development paradigm characterized by synergies and mutual promotion among talent development, cultural exchange, and green and low-carbon initiatives. Together, we aim to build a sustainable and low-carbon future.

Image source:
Shanghai Campus

APPENDIX

Greenhouse Gas Verification Statement - Year 2019

SGS

Statement of Conformity CN23/00002448

Greenhouse Gas Verification Statement

The inventory of Greenhouse Gas emissions in
1 Jan. 2019 to 31 Dec. 2019 of

China Europe International Business School

Business address: 699 Hongfeng Road, Pudong, Shanghai, P.R. China
Organization boundary: Detail organization boundary information has been listed in Annex, for multi-site statement

has been verified in accordance with ISO 14064-3:2019 as meeting the requirements of

ISO 14064-1:2018

Direct Emissions [Category 1]
1,204.254 tonnes of CO2e
Indirect Emissions from Imported Energy [Category 2]
6,963.904 tonnes of CO2e
Indirect Emissions from Transportation [Category 3]
[be determined as non-significant indirect emissions and not quantified]
Indirect Emissions from Products Used by An Organization [Category 4]
[be determined as non-significant indirect emissions and not quantified]
Indirect Emissions Associated with The Use of Products from The Organization [Category 5]
[be determined as non-significant indirect emissions and not quantified]
Indirect Emissions from Other Sources [Category 6]
[be determined as non-significant indirect emissions and not quantified]
Total Emissions Quantified
8,168.158 tonnes of CO2e

Authorized by
David Xin
Sr. Director - Knowledge
DATE: 28 Apr. 2023
SGS-CSTC Standards Technical Services Co., Ltd.
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Greenhouse Gas Verification Statement - Year 2021

SGS

Statement of Conformity CN23/00002958

Greenhouse Gas Verification Statement

The inventory of Greenhouse Gas emissions in
1 Jan. 2021 to 31 Dec. 2021 of

China Europe International Business School

Business address: 699 Hongfeng Road, Pudong, Shanghai, P.R. China
Organization boundary: Detail organization boundary information has been listed in Annex, for multi-site statement

has been verified in accordance with ISO 14064-3:2019 as meeting the requirements of

ISO 14064-1:2018

Direct Emissions [Category 1]
1,214.06 tonnes of CO2e
Indirect Emissions from Imported Energy [Category 2]
6,930.93 tonnes of CO2e
Indirect Emissions from Transportation [Category 3]
[be determined as non-significant indirect emissions and not quantified]
Indirect Emissions from Products Used by An Organization [Category 4]
[be determined as non-significant indirect emissions and not quantified]
Indirect Emissions Associated with The Use of Products from The Organization [Category 5]
[be determined as non-significant indirect emissions and not quantified]
Indirect Emissions from Other Sources [Category 6]
[be determined as non-significant indirect emissions and not quantified]
Total Emissions Quantified
8,144.99 tonnes of CO2e

Authorized by
David Xin
Sr. Director - Knowledge
DATE: 26 May 2022

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CEIBS