



Changde Urban Development Group Co., Ltd.

Second-Party Opinion | Sustainable Finance Framework

Framework Type

Sustainable

Analytical Standards

- » Green Bond Principles (GBP) (June 2021 Edition)
- » Social Bond Principles (SBP) (June 2023 Edition)
- » Sustainability Bond Guidelines (SBG) (June 2021 Edition)
- » Green Loan Principles (GLP) (February 2023 Edition)
- » Social Loan Principles (SLP) (February 2023 Edition)
- » United Nations Sustainable Development Goals (SDGs)

Industry

Local Investment and Development Companies

Country/Region

China

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Summary

Lianhe Green has reviewed a series of documents including the "Sustainable Finance Framework of Changde Urban Development Group Co., Ltd.", and assessed the company's relevant work in respect of the use of proceeds, project evaluation and selection process, management of proceeds, reporting, and external review. Lianhe Green considers that the Framework is in compliance with the *Sustainability Bond Guidelines (SBG) (June 2021 Edition)*, *Green Loan Principles (GLP) (February 2023 Edition)*, the *Green Bond Principles (GBP) (June 2021 Edition)*, the *Social Loan Principles (SLP) (February 2023 Edition)*, and the *Social Bond Principles (SBP) (June 2023 Edition)*. In addition, the eligible green projects listed in this Framework are in line with the *Green Loan Principles (GLP) (February 2023 Edition)*, the *Green Bond Principles (GBP) (June 2021 Edition)*, and the *United Nations Sustainable Development Goals (SDGs)*; the eligible social projects listed in this Framework are in line with the *Social Loan Principles (SLP) (February 2023 Edition)*, the *Social Bond Principles (SBP) (June 2023 Edition)*, and the *United Nations Sustainable Development Goals (SDGs)*.

About the Company

Changde Urban Development Group Co., Ltd. (hereinafter referred to as "CUDG" or "the Group") was established in October 2019. CUDG is a state-owned enterprise approved by the Changde Municipal People's Government Office and wholly owned and supervised by the Changde State-owned Assets Supervision and Administration Commission. CUDG was designated to carry out Changde Municipal Government's blueprint for the municipal development of Changde Municipality, the Group has established itself as a leading state-owned asset investment company in Hunan Province and plays an important role in the urbanisation of Changde Municipality.

The Group's operations and investment primarily focus on the product sales, infrastructure construction, real estate development and engineering construction. The Group also conducts other businesses including land expropriation and compensation, water supply and others.

The Group is committed to aligning its business model with sustainability development. It has adopted strict environmental and social measures and assessment to ensure the compliance with national laws and regulations that have material impact on its business. CUDG has adopted management measures on air and greenhouse gas emissions, and water discharges, by implementing a series of environmental and safety management policies on daily operations to reduce the impact on the environment and contribute to the local communities, which leads CUDG towards a low-carbon economy and contribution to China's carbon peak in 2030, carbon neutrality in 2060 and rural revitalization.

About the Framework of CUDG



CUDG has prepared the Sustainable Finance Framework for Changde Urban Development Group Co., Ltd. (hereinafter referred to as the "Framework"), which is intended to provide overarching principles and guidelines for all sustainable development financing opportunities for CUDG.

The sustainable bonds or loans issued under the Framework will comply with the International Capital Market Association's (ICMA's) *Sustainability Bond Guidelines (SBG) (June 2021 Edition)*, *Green Bond Principles (GBP) (June 2021 Edition)*, and *Social Bond Principles (SBP) (June 2023 Edition)*, as well as the *Green Loan Principles (GLP) (February 2023 Edition)* and the *Social Loan Principles (SLP) (February 2023 Edition)* published by the Loan Market Association (LMA), the Loan Syndications and Trading Association (LSTA) and the Asia-Pacific Loan Market Association (APLMA).

In this Second-Party Opinion, Lianhe Green has specifically examined the sustainable finance framework but has not reviewed any transaction-specific legal documents or marketing materials. Nevertheless, the framework does provide a description of the qualifying projects as described in the legal documentation of the framework.

This framework addresses the five pillars including use of proceeds, project evaluation and selection, management of proceeds, reporting, and external review.

A. Use of Proceeds

Company Materials

The proceeds of each sustainable transaction issued by CUDG will be used to finance and/or refinance the assets or projects set out in the Framework. The proceeds of the Green Bonds, Green Loans or any other similar forms of debt instruments ("Sustainability Financing Transactions" or "SFTs") will be used for Qualified Green Projects as defined in Table 1; the proceeds of the Social Bonds or Loans will be used for Qualified Social Projects as defined in Table 2.

Table 1: Qualified Green Projects

Eligible Green Project Categories	Qualified Green Projects
Renewable Energy	Investment, acquisition and expenditures related to design, manufacture, construction, installation, and operation of renewable energy systems, including photovoltaic solar and wind power (onshore/offshore).
Energy Efficiency	Investment, acquisition and expenditures related to design, manufacture, construction, installation, and operation of facilities that store electricity and return it at a later time in the form of electricity, including 1) pumped hydropower storage; 2) large scale batteries storage system.
Clean Transportation	Investment, acquisition and expenditures related to purchase, manufacture, construction, installation and maintenance of 1) public transportation system (i.e. subways, light railways, tram, public transportation vehicles and other urban rail transportation facilities) in urban and rural areas, 2) new energy vehicles (i.e. electric buses, electric trucks, etc), hybrid vehicles, and 3) its infrastructure such as electric vehicle charging stations.



Sustainable Water and Wastewater Management	Investment, acquisition and expenditures related to construction, development, upgrade, installation, operation and maintenance the facilities of water supply infrastructure, wastewater treatment infrastructure, urban drainage systems, flood control and defenses, pumping stations, distribution network, water recycling systems (i.e. recycling or reuse water, rainwater collection) to save water, improve the water leakage performance and the efficiency.
Terrestrial and Aquatic Biodiversity	Investment, acquisition and expenditures related to river, lake, water system and environment management projects (i.e. remediation and treatment of urban black and malodorous water, clean up the rubbish and carry out dredging activities), restoration of public wetland reserve, and conservation of terrestrial and river biodiversity and ecosystems and greening of landscapes.
Climate Change Adaptation	Investment, acquisition and expenditures related to construction, refurbishment and operation of infrastructure for urban flood protection and mitigation such as rivers works, dams and dykes, “sponge cities” projects and others for flood control, waterlogging prevention in order to mitigate the physical climate change risk and improve the environmental resilience.

Table 2: Qualified Social Projects

Eligible Social Project Categories	Qualified Social Projects
Affordable Housing – Resettlement Houses and Shanty Town and Houses¹	Investments and expenditures in projects that provide affordable housing for the general public and vulnerable groups, including indemnificatory public rental housing, economically affordable housing, construction projects and government-supported affordable housing construction projects. These include urban renewal / old city reconstruction, resettlement houses, shanty town and houses projects to improve the living conditions of residents living in shantytowns, as well as construction of new community agglomeration projects, which are for the purpose of providing affordable housing units for resettled populations.
Access to Essential Services – Healthcare and Education	Investment and expenditures of projects related to provide, construction and operation the affordable and access to healthcare and education for the general public and vulnerable groups. These include nursing homes and supporting medical facilities to improve the living conditions, healthcare accessibility, additional care and support to elderly people, as well as the school facilities and educational resources to improve the accessibility and affordability of the regional teenagers population to education resources ratio, provide more teenagers with educational opportunities, in order to helps address the issue of inadequate educational resources allocation and enables more teenager to receive education.

Meanwhile, CUDG declares that the proceeds will not be used for the following purposes:

¹ Housing for the general public and vulnerable groups in accordance with local government and regulatory definitions, in order to improve quality of life, safety of living and independence for vulnerable groups and underprivileged population. The housing will not go for market for profit and the interest rate of housing will be in line with standard market rate.



- 1) Production or trade in any product or activity deemed illegal under host country laws or regulations or international conventions and agreements, or subject to international bans, such as pharmaceuticals, pesticides/herbicides, ozone-depleting substances, polychlorinated biphenyls (PCBs), wildlife or products regulated under the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES).
- 2) Production or trade in weapons and munitions.
- 3) Production or trade in alcoholic beverages (excluding beer and wine).
- 4) Production or trade in tobacco.
- 5) Gambling, casinos, and equivalent enterprises.
- 6) Production or trade in radioactive materials. This does not apply to the purchase of medical equipment, quality control (measurement) equipment and any equipment where any international financial company considers the radioactive source to be trivial and/or adequately shielded.
- 7) Production or trade in unbonded asbestos fibers. This does not apply to the purchase and use of bonded asbestos cement sheeting where the asbestos content is less than 20 per cent.
- 8) Drift net fishing in the marine environment using nets over 2.5 kilometers in length.
- 9) Production or activities involving harmful or exploitative forms of forced labor/harmful child labor.
- 10) Commercial logging operations for use in primary tropical forest.
- 11) Production or trade in wood or other forestry products other than from sustainably managed forests.
- 12) Projects related to nuclear production.
- 13) Projects related to fossil fuel production.
- 14) Projects related to coal mining.
- 15) Projects related to hydropower which installed capacity > 25MW

Opinion of Lianhe Green

Lianhe Green has reviewed a number of documents, including the Sustainable Finance Framework, and has conducted a comprehensive review of CUDG's policy.

Lianhe Green has compared the eligible green projects listed in this framework with the *Green Bond Endorsed Projects Catalogue (2021 Edition)*, *Green Loan Principles (GLP) (February 2023 Edition)*, *Green Bond Principles (GBP) (June 2021 Edition)*, and the *United Nations Sustainable Development Goals (SDGs)* accordingly. Besides, Lianhe Green also has compared the eligible social projects listed in this framework with the *Social Loan Principles (SLP) (February 2023 Edition)*, the *Social Bond Principles (SBP) (June 2023 Edition)*, and the *United Nations Sustainable Development Goals (SDGs)*.

1) Eligible Green Projects: Renewable Energy

Eligible Green Projects

Investment, acquisition and expenditures related to design, manufacture, construction, installation, and operation of renewable energy systems, including photovoltaic solar and wind power (onshore/offshore)

Green Standards

- » GBP: Renewable energy - including production, transmission, appliances and products.
- » GLP: Renewable energy - including production, transmission, appliances and products.
- » SDGs: Goal 7 - Affordable and Clean Energy



Lianhe Green Findings / Suggestions

In May 2023, Changde City [issued](#) the “Changde City Carbon Peaking Implementation Plan”. The plan states that during the 14th Five-Year Plan period, it plans to increase the proportion of non-fossil energy consumption to 23% and the total installed capacity of new energy power generation to surpass 3 million kW by 2025. It also aims to complete the targets set by Hunan Province to reduce energy consumption per unit of GDP and carbon emissions, reaching the goal of carbon peaking by 2030.

For renewable energy, Changde City aims to promote the construction of photovoltaic solar and wind power projects, and explore the potential of hydropower. For solar energy, it will promote the large-scale development of distributed photovoltaic solar, support the construction of distributed photovoltaic solar, power generation projects on the roof of industrial parks, develop fishery and agricultural photovoltaic solar, and agricultural facility photovoltaic power generation projects suitable for local conditions. For wind energy, it seeks to steadily promote the construction of mountain wind generator, use the idle areas around rivers and industrial parks to develop distributed wind power suitable for local conditions. For other renewable energy source, it aims to promote agricultural and forestry biomass power generation, waste incineration power generation, and encourage the transformation of biomass direct combustion power generation to cogeneration. Large-scale application of shallow geothermal energy will be promoted, and the construction of green and intelligent micro-grid in rural areas will be implemented. By 2025, the cumulative installed capacity of wind power will reach 800,000 kW, and the cumulative installed capacity of photovoltaic solar generation will reach 2.2 million kW. By 2030, the cumulative installed capacity of wind power will reach 1 million kW, and the cumulative installed capacity of photovoltaic solar power generation will reach 5 million kW.

Lianhe Green believes that these types of projects align with the "Green Bond Endorsed Project Catalogue (2021 Edition)":

1. Category 3: Clean Energy Industry - 3.2 Clean Energy - 3.2.1 Production of New Energy Equipment and Clean Energy Equipment - 3.2.1.1 Production of Wind Generators
2. Category 3: Clean Energy Industry - 3.2 Clean Energy - 3.2.1 Production of New Energy Equipment and Clean Energy Equipment - 3.2.1.2 Production of Solar Generators
3. Category 3: Clean Energy Industry - 3.2 Clean Energy - 3.2.2 Construction and Operation of Renewable Energy Facilities - 3.2.2.1 Construction and Operation of Wind Power Facilities
4. Category 3: Clean Energy Industry - 3.2 Clean Energy - 3.2.2 Construction and Operation of Renewable Energy Facilities - 3.2.2.2 Construction and Operation of Solar Energy Utilization Facilities

Lianhe Green considers these types of projects are eligible for the EU taxonomy, as electricity generation using solar photovoltaic technology and electricity generation from wind power both meet the substantial contribution (or technical screening) criteria for the climate change mitigation objective under EU taxonomy.

2) Eligible Green Projects: Energy Efficiency

Eligible Green Projects

Investment, acquisition and expenditures related to design, manufacture, construction, installation, and operation of facilities that storage electricity and return it at a later time in the



form of electricity, including 1) pumped hydropower storage and 2) large scale batteries storage system.

Green Standards

- » GBP: Energy efficiency (such as in new and refurbished buildings, energy storage, district heating, smart grids, relevant equipment and products)
- » GLP: Energy efficiency (such as in new and refurbished buildings, energy storage, district heating, smart grids, relevant equipment and products)
- » SDGs: Goal 7 – Affordable and Clean Energy; Goal 13 – Climate Action

Lianhe Green Findings / Suggestions

In May 2023, Changde City [issued](#) the “Changde City Carbon Peaking Implementation Plan”. The plan mentioned the need to accelerate the construction of a new power system. Changde City will promote the development of renewable energy and energy storage facilities that are integrated with energy source, grid, load and storage. This helps connect new energy and power grid construction effectively, enhancing the power grid's ability to absorb new energy, and carry out pilot projects on energy storage. Changde City also aims to actively develop "new energy + energy storage" project, multi-energy source projects, and combine generation from solar and wind projects with energy storage. Changde City will accelerate the development of pumped storage hydropower resources, improve the flexibility, economy and security of the power system, and promote the development of pumped storage hydropower projects in Taoyuan, Shimen and Linli. Changde City expects the newly installed capacity of energy storage power stations will reach 250,000 kW by 2025, and reach 500,000 kW by 2030.

Lianhe Green believes that these types of projects align with the "Green Bond Endorsed Project Catalogue (2021 Edition)":

1. Category 3: Clean Energy Industry - 3.2 Clean Energy - 3.2.3 Efficient Operation of Clean Energy - 3.2.3.2 Operation and Construction of Energy Efficient Storage Facilities
2. Category 3: Clean Energy Industry - 3.2 Clean Energy - 3.2.3 Efficient Operation of Clean Energy - 3.2.3.5 Construction and Operation of Pumped-Storage Power Stations

Lianhe Green considers these types of projects are eligible for the EU taxonomy, as storage of electricity (including pumped hydropower storage) and manufacture of batteries both meet the substantial contribution (or technical screening) criteria for the climate change mitigation objective under EU taxonomy.

3) Eligible Green Projects: Clean Transportation

Eligible Green Projects

Investment, acquisition and expenditures related to purchase, manufacture, construction, installation and maintenance of

- 1) public transportation system (i.e. subways, light railways, tram, public transportation vehicles and other urban rail transportation facilities) in urban and rural areas,
- 2) new energy vehicles (i.e. electric buses, electric trucks, etc), hybrid vehicles, and
- 3) its infrastructure such as electric vehicle charging stations.

Green Standards



- » GBP: Clean transportation (such as electric, hybrid, public, rail, non-motorised, multimodal transportation, infrastructure for clean energy vehicles and reduction of harmful emissions);
- » GLP: Clean transportation (such as electric, hybrid, public, rail, non-motorised, multimodal transportation, infrastructure for clean energy vehicles and reduction of harmful emissions);
- » SDGs: Goal 11 - Sustainable Cities and Communities

Lianhe Green Findings / Suggestions

In May 2023, Changde City [issued](#) the “Changde City Carbon Peaking Implementation Plan”, which pointed out the following regarding the low-carbon transportation:

1. Promote low-carbon transformation of transportation equipment. Changde City will actively expand the application of clean energy in the field of transportation. Changde City expects the number of electric vehicles in the public transport system will reach 1,800 by 2025, accounting for 100% of the vehicles, and achieve full coverage of electric facilities for thousand-ton level port. The proportion of new energy vehicles will reach 40% by 2030.
2. Build a green and efficient transportation system. Changde City aims to improve the collection and distribution system, promote the use of railway and waterway over highway for bulk goods and medium-and-long distances transportation, and increase the proportion of multimodal transport. Changde City expects the proportion of green and low-carbon trips in the city will be no less than 70% by 2025, and the freight volume of railways and waterways will increase by 20% and 30% respectively compared with 2020. By 2030, the proportion of green and low-carbon travel in the city will not be less than 80%.
3. Accelerate the construction of low-carbon and smart transportation infrastructure. By 2025, the service radius of public charging facilities in the core area of the city should be less than 2 kilometers, the service radius of public charging facilities in the core area of other counties and urban areas should be less than 3 kilometers, the interval between highways charging stations and railway should be less than 50 kilometers, and the number of charging facilities in the city should be more than 22,700, meeting the charging needs of electric vehicles traveling in and out of the city. The recovery rate and recycling rate of used pavement materials on expressways and trunk highways should reach 100%, and the coverage rate of charging (replacing) power stations in service areas should reach 100%.

Lianhe Green is in view that this type of project meets the "5. Sustainable Upgrade of Infrastructure - 5.5 Green Transport (Infrastructure) - 5.5.1 Public Passenger and freight transportation in Urban and Rural Areas - 5.5.1.5 Construction and Operation of Public Transportation System in Urban and Rural Areas" under the *Green Bond Endorsed Projects Catalogue (2021 Edition)*.

Lianhe Green considers these types of projects are eligible for the EU taxonomy, as transportation assets are required to have zero direct tailpipe CO₂ emission; or the low emission transportation assets (i.e. hybrid vehicles) will have a direct GHG emission under 50g CO₂e/p-km until 31 December 2025, and zero emission 2026 onward both meet the substantial contribution (or technical screening) criteria for the climate change mitigation objective under EU taxonomy.



4) Eligible Green Projects: Sustainable Water and Wastewater Management

Eligible Green Projects

Investment, acquisition and expenditures related to construction, development, upgrade, installation, operation and maintenance the facilities of water supply infrastructure, wastewater treatment infrastructure, urban drainage systems, flood control and defenses, pumping stations, distribution network, water recycling systems (i.e. recycling or reuse water, rainwater collection) to save water, improve the water leakage performance and the efficiency.

Green Standards

- » GBP: Sustainable water and wastewater management (including sustainable infrastructure for clean and/or drinking water, wastewater treatment, sustainable urban drainage systems and river training and other forms of flooding mitigation);
- » GLP: Sustainable water and wastewater management (including sustainable infrastructure for clean and/or drinking water, wastewater treatment, sustainable urban drainage systems and river training and other forms of flooding mitigation);
- » SDGs: Goal 6 - Clean water and sanitation

Lianhe Green Findings / Suggestions

In May 2023, Changde City [issued](#) the "Changde City Carbon Peaking Implementation Plan". The plan mentioned about construction of facilities for park sewage centralized collection, treatment and reuse. It also plans to strengthen sewage treatment and recycling by improving sewage treatment facilities and pipe networks, and promote the utilization of sewage resources.

Lianhe Green believes that these types of projects align with the "Green Bond Endorsed Project Catalogue (2021 Edition)":

1. Category 4: Ecology and Environment-related sector - 4.2 Ecological Protection and Construction - 4.2.1 Conservation and Restoration of Natural Ecosystems - 4.2.1.6 Protection and Restoration of Rivers, Lakes and Wetlands
2. Category 4: Ecology and Environment-related sector - 4.2 Ecological Protection and Construction - 4.2.1 Conservation and Restoration of Natural Ecosystems - 4.2.1.11 Drought and Flood Management for Water-Related Ecosystem
3. Category 5: Sustainable Upgrade of Infrastructure - 5.3 Pollution Prevention - 5.3.1 Urban Environmental Infrastructure - 5.3.1.1 Construction and Operation of Facilities for Sewage Treatment, Recycling, and Sludge Treatment and Disposal
4. Category 5: Sustainable Upgrade of Infrastructure - 5.4 Water Saving and Non-conventional Water Resources - 5.4.2 "Sponge" City for Flood Prevention - 5.4.2.4 Construction, Operation and Renovation of Up-to-standard Urban Drainage Facilities

Lianhe Green generally considers these types of projects to positively contribute to the environment, as water supply, sewerage, waste management and remediation sector is included in the EU taxonomy. However, more information on the substantial contribution criteria (or technical screening criteria) is required for eligibility.



5) Eligible Green Projects: Terrestrial and Aquatic Biodiversity

Eligible Green Projects

Investment, acquisition and expenditures related to river, lake, water system and environment management projects (i.e. remediation and treatment of urban black and malodorous water, clean up the rubbish and carry out dredging activities), restoration of public wetland reserve, and conservation of terrestrial and river biodiversity and ecosystems and greening of landscapes.

Green Standards

- » GBP: Terrestrial and aquatic biodiversity conservation (including the protection of coastal, marine and watershed environments);
- » GLP: Terrestrial and aquatic biodiversity conservation (including the protection of coastal, marine and watershed environments);
- » SDGs: Goal 6 - Clean water and sanitation; Goal 15: Life on Land

Lianhe Green Findings / Suggestions

In May 2023, Changde City [issued](#) the “Changde City Carbon Peaking Implementation Plan”. The plan includes pilot projects on ecological protection and restoration in key areas, ecological corridor and forest care construction project, national reserve forest construction project and forestry carbon sequestration project.

Lianhe Green believes that these types of projects align with the "Green Bond Endorsed Project Catalogue (2021 Edition)":

1. Category 1. Energy Saving and Environmental Protection Industry - 1.3 Pollution Prevention - 1.3.2 Treatment of Sewage Water - 1.3.2.3 Remediation and Treatment of Urban Black and Malodorous Water
2. Category 4. Ecology and Environment-related sector - 4.2 Ecological Protection and Construction - 4.2.1 Conservation and Restoration of Natural Ecosystems - 4.2.1.6 Protection and Restoration of Rivers, Lakes and Wetlands
3. Category 5. Sustainable Upgrade of Infrastructure - 5.4 Water Saving and Non-conventional Water Resources - 5.4.2 “Sponge” City for Flood Prevention - 5.4.2.5 Restoration of the Natural Ecology of Urban Water Bodies

Lianhe Green generally considers these types of projects to positively contribute to the environment, as restoration of wetlands activities are included in the EU taxonomy. However, more information on substantial contribution criteria (or technical screening criteria) is required for eligibility.

6) Eligible Green Projects: Climate Change Adaptation

Eligible Green Projects

Investment, acquisition and expenditures related to construction, refurbishment and operation of infrastructure for urban flood protection and mitigation such as rivers works, dams and dykes ,



"sponge cities" projects and others for flood control, waterlogging prevention in order to mitigate the physical climate change risk and improve the environmental resilience.

Green Standards

- » GBP: Climate change adaptation (including efforts to make infrastructure more resilient to impacts of climate change, as well as information support systems, such as climate observation and early warning systems);
- » GLP: Climate change adaptation (including efforts to make infrastructure more resilient to impacts of climate change, as well as information support systems, such as climate observation and early warning systems);
- » SDGs: Goal 13 - Climate Action

Lianhe Green Findings / Suggestions

Lianhe Green believes that these types of projects align with the "Green Bond Endorsed Project Catalogue (2021 Edition)":

1. Category 4. Ecology and Environment-related sector - 4.2 Ecological Protection and Construction - 4.2.1 Conservation and Restoration of Natural Ecosystems - 4.2.1.6 Protection and Restoration of Rivers, Lakes and Wetlands

2. Category 4. Ecology and Environment-related sector - 4.2 Ecological Protection and Construction - 4.2.1 Conservation and Restoration of Natural Ecosystems - 4.2.1.11 Drought and Flood Management for Water-Related Ecosystem

Lianhe Green views river works, dams, dykes, 'sponge cities' projects, and other flood control and waterlogging prevention projects as generally making a positive contribution to climate change adaptation. However, more detailed information on the substantial contribution criteria (or technical screening criteria) is required to determine eligibility for the EU taxonomy.

1) Eligible Social Projects: Affordable Housing — Resettlement Houses and Shanty Town and Houses

Eligible Social Projects

Investments and expenditures in projects that provide affordable housing for the general public and vulnerable groups, including indemnificatory public rental housing, economically affordable housing, construction projects and government-supported affordable housing construction projects. These include urban renewal / old city reconstruction, resettlement houses, shanty town and houses projects to improve the living conditions of residents living in shantytowns, as well as construction of new community agglomeration projects, which are for the purpose of providing affordable housing units for resettled populations.

Social Standards

- » SBP: Affordable housing;
- » SLP: Affordable housing;
- » SDGs: Goal 1 - No Poverty; Goal 11 - Sustainable Cities and Communities

Lianhe Green Findings / Suggestions



Apartments for talents are rental apartments specially provided for high-end talents, so as to provide short-term rental and transitional housing for them to work or start a business in a certain place. Solving the housing difficulties of young talents is a social project. Young adults are in the early stages of life and face various pressures such as career planning and family issues, and housing problems. In recent years, Changde City has made effort to promote the affordable housing. In November 2023, the government [released](#) the “Implementation rules for the management of public rental housing in Changde City” to support affordable housing. In February 2024, the Change City government [mentioned](#) that it started construction for 7997 affordable housing in 2023.

Lianhe Green is in view that this type of project can increase the number of affordable housing and apartments provided for low-income juveniles. It is also an urgent need for China’s real estate industry and social and economic development. It not only can meet the housing needs of young people, but also promote sustainable economic and social development.

2) Eligible Social Projects: Access to Essential Services – Healthcare and Education

Eligible Social Projects

Investment and expenditures of projects related to provide, construction and operation the affordable and access to healthcare and education for the general public and vulnerable groups. These include nursing homes and supporting medical facilities to improve the living conditions, healthcare accessibility, additional care and support to elderly people, as well as the school facilities and educational resources to improve the accessibility and affordability of the regional teenagers population to education resources ratio, provide more teenagers with educational opportunities, in order to helps address the issue of inadequate educational resources allocation and enables more teenager to receive education.

Social Standards

- » SBP: Access to essential services (e.g. health, education and vocational training, healthcare, financing and financial services);
- » SLP: Access to essential services (e.g. education and vocational training, public health/healthcare, public health emergency response energy (including electricity), financing and financial services, other governmental offices servicing select populations (and/or in low /low-middle income countries));
- » SDGs: Goal 3 - Good Health and Well-Being; Goal 4 - Quality Education

Lianhe Green Findings / Suggestions

The Changde City government is supportive to both healthcare and education. In May 2023, the Changede City government [announced](#) 16 measures to support high quality development of health care institutions, including accelerating health care payments, improve payment and information systems, and improve the supervision and administration mechanism. In terms of education, the Changde City government has [invested](#) RMB 3bn since 2020 to improve high school development and improve educational resources, including construction of gymnasiums and education equipment.



Lianhe Green is in view that these types of projects will help promote people's health and well-being, And enhance the quality of education for teenagers, which in turn promote sustainable economic and social development.

B. Project Evaluation and Selection Process

Company Materials

The CUDG has strict internal control mechanism to ensure that the environmental and social risks are well managed and mitigated. The all-eligibility criteria and projects will compliance with the national standards. And all the projects will undergo a flexibility study, environmental/social impact assessment to ensure the effective environmental protection, pollution control and safety measures as well as the positive social impacts.

The project evaluation and selection process of CUDG will ensures that an amount equivalent to net proceeds from each Sustainability Financing Transactions (or "SFTs") will be allocated to projects that meet the criteria set out in the use of proceeds under this framework. The Group has set up a Sustainability Financing Working Group (the "SFWG") to govern the process, consisting of senior members in various departments such as Board of Director Office, Strategy and Investment Management Department, Operation and Management Department, Financing Department, and Legal and Audit Department of the company. The SFWG will meet at least every 12 months or whenever necessary to discuss, assess and select Eligible Green and Social Projects according to the eligibility and exclusion criteria under this framework. The SFWG will select the projects that comply with Environmental Protection Law of the People's Republic of China, Environmental Impact Assessment Law of People's Republic of China, Energy Saving Regulations of People's Republic of China, Water Pollution Prevention and Control Action Plan, Urban Black and Odorous Water Bodies Remediation Work Guidelines, Green Bond Endorsed Projects Catalogue (2021 Edition), and other related regulations and policies in China related to the sustainability development. The strategy and investment management team will submit the potential eligible projects to the SFWG for further review. Then the SFWG will assess each project by its feasibility study report, Environment Impact Assessment Report etc., and the senior members from each department in the SFWG will represent to evaluate whether the project fulfil the eligibility and exclusion criteria from their professional and expertise, for instances, the representative from operation and management department will evaluate from the perspective of the environment, health and safety, and the representative from legal and audit department will evaluate from the perspective of the effectiveness of internal control procedure and system, the projects compliance status etc. Then the selected projects will be shortlisted and presented to the Board of Directors of the Company for final approval. After receiving the assessment and approval from the Board of Directors, the selected projects will in the Eligible Green and Social Projects list.

SFWG will ensure that each Eligible Green and Social Project complies not only with this framework but also the environmental guidelines which are applicable to the Group, as well as all applicable national environmental standards and local laws and regulations. The Eligible Green and Social Projects will also be selected with reference to the United Nations Sustainable Development Goals.

The SFWG will be responsible for managing any future updates of the framework, including any expansion of requirements of the use of proceeds.



Opinion of Lianhe Green

Lianhe Green has reviewed the Sustainable Finance Framework and other series of documents, and CUDG's policies on project assessment and screening process.

CUDG has established a robust assessment process for the selection and identification of green and social projects, and at the same time, a robust communication system for project assessment and screening has been established, whereby each participating department submits a list of potential projects and elaborates on whether or not the nominated projects are in line with the categories of green and social projects under the Framework. SFWG will be responsible for the review and approval of potential green and social projects.

After the assessment, Lianhe Green considers that CUDG has established a robust project assessment and screening system, which meets the requirements of the assessment criteria.

C. Management of Proceeds

Company Materials

The issuer intends to allocate, an amount equal to the net proceeds over time to finance or refinance the Eligible Green and Social Projects, which are selected according to the Eligibility Criteria, and using the evaluation and selection process outlined above.

The net proceeds of each SFT will be deposited in the general funding accounts and earmarked for allocation towards the eligible green and social projects. The Group will maintain a SFT register to track the use of proceeds for the SFT. Sustainability finance allocation register will be established to record the allocation of proceeds.

The register will contain the following information including:

1. Type of funding transaction: ISIN (if applicable), pricing date, maturity date etc.
2. Eligible Green and Social Projects allocation list, information including:
 - The eligible projects list, including for each eligible project, the eligible green and social project category, project description, project location, ownership percentage, total investment amount, amount allocated, settled currency, etc.
 - The balance of unallocated proceeds
 - The information of temporary investment for unallocated proceeds

Any balance of issuance proceeds which are not yet allocated to Eligible Green and Social Projects will be temporarily held the unallocated net proceeds in accordance with the Group's liquidity guidelines in cash, cash equivalents or short-term deposits, and commits not invest to the projects which subject to exclusions criteria under this framework. For each issuance under this framework, the Group will review the register on an annual basis.

During the life of the SFT(s) issued, if the designated projects cease to fulfil the eligibility criteria, the net proceeds will be re-allocated to replacement projects that comply with the eligibility criteria, as soon as reasonably practicable.



Opinion of Lianhe Green

Lianhe Green has reviewed a series of documents such as the Sustainable Finance Framework and CUDG's policies on the management of proceeds.

CUDG will use the general fund account to receive, store, transfer and repay the principal and interest of the proceeds, and ensure the smooth management of the proceeds in terms of investment, application and auditing. The receipt, storage, use, management and supervision of the proceeds The receipt, storage, use, management and supervision of raised funds will be subject to approval procedures in strict accordance with the relevant provisions of the framework..

In addition, during the horizon of existing green bonds/loans and the social bonds/loans, the company will track and regularly allocate and adjust the balance of the proceeds according to the status of the green and social projects, and will track and record and manage the unused proceeds.

Upon assessment, Lianhe Green considers that CUDG has established a robust system on management of proceeds, which is in line with the requirements of the assessment criteria.

D. Reporting

Company Materials

For the SFT(s) issued under the framework, CUDG will make and keep readily category level disclosure available reports via the Group's website, or the annual report on the allocation and impacts of the net proceeds raised under the framework or an amount equal to these net proceeds, on an annual basis starting at one year from the first SFT issuance until the full allocation of the net proceeds to the Eligible Green and Social Projects, and thereafter in the event of any material changes.

The allocation report will include the following information at SFT and Eligible Category levels where applicable:

- » The net proceeds of each SFT outstanding;
- » List of Eligible Green and Social Projects with descriptions and the amount that has been allocated and earmarked;
- » The proportion of the proceeds allocated to refinancing of existing Eligible Green and Social Projects, with the clarification on which investment or project portfolios refinanced;
- » The balance of unallocated proceeds held in cash, cash equivalents or short-term deposits and its temporary treatment (if any);
- » The types of temporary unallocated funds placements and uses.

Impact Reporting:

CUDG will disclose the impacts of qualified green and social projects. Depending on the availability of data, the disclosure will include, but not be limited to, the information below:

Table 3: Impact Indicators



Eligible Project Categories	Impact Indicators
Renewable Energy	<ul style="list-style-type: none"> Annual renewable energy generation (GWh for electricity and GJ for other energy) Annual GHG emission or standard coal equivalent reduced/avoided
Energy Efficiency	<ul style="list-style-type: none"> Annual energy saving (GWh for electricity and GJ for other energy)
Clean Transportation	<ul style="list-style-type: none"> Number of clean vehicles deployed (e.g. electric) Number and type of clean transportation infrastructure built Annual GHG emission reduced/avoided (tonnes of CO₂ equivalent/a)
Sustainable water and wastewater management	<ul style="list-style-type: none"> Annual absolute (gross) amount of wastewater treated, reused or avoided before and after the project in m³/a Amount of rain water collected and reused in m³/a
Terrestrial and aquatic biodiversity	<ul style="list-style-type: none"> Maintenance/safeguarding/increase of natural landscape area in m² and in % for increase Restored, conserved or newly developed wetland/green area in m²
Climate Change Adaptation	<ul style="list-style-type: none"> Additional water availability and/or increased water catchment in m³/year Reduction in number of operating days lost due to floods
Affordable Housing	<ul style="list-style-type: none"> Number of dwellings constructed Number of individuals/families benefiting from subsidized housing
Access to Essential Services	<ul style="list-style-type: none"> Number of people received education/training Number of people received healthcare service

Opinion of Lianhe Green

Lianhe Green has reviewed a series of documents, including the Sustainable Finance Framework and CUDG's policy.

CUDG will regularly disclose the annual report of green bonds/loans and social bonds/loans until the proceeds come to maturity. The disclosure indicators for environmental benefits comply with the requirements of ICMA's "Handbook – Harmonised Framework for Impact Reporting (2023)" and Harmonised Framework for Impact Reporting for Social Bonds (2023)" subject to the availability of suitable information and data.

Upon assessment, Lianhe Green considers that CUDG has established a robust complete information disclosure and reporting system, which meets the requirements of the assessment criteria.

E. External Review

Company Materials



Pre-issuance:

The Group has engaged Lianhe Green to provide a Second-Party Opinion on this framework to review and confirm its alignment with the GBP, SBP, SBG, GLP and SLP. The Second-Party Opinion together with the framework will be published on the Group's website.

Post-issuance:

An independent third party may be engaged to review and verify the internal tracking and allocation of funds from the SFTs to Eligible Green and Social Projects, as well as the Eligible Projects expected and actual impact that is disclosed in the Annual Reporting.

Opinion of Lianhe Green

CUDG has engaged Lianhe Green to assess the compliance of this framework with relevant international and domestic standards and to issue a second-party assessment opinion.

Upon assessment, CUDG has established a complete management system for external evaluation and meets the requirements of the assessment standards.

Analysis of Environmental Benefits and Social Benefits

Eligible Green Project: Renewable Energy

Environmental Benefits

Solar and wind energy have great potential for development in new energy due to their renewable and pollution-free characteristics. Solar and wind power generation does not produce atmospheric pollutants, reducing emissions of pollutants such as SO₂, NO_x and dust. At the same time, it saves fossil fuels and achieve energy conservation and emission reduction. Solar energy, as the most abundant renewable energy source, is more evenly distributed across the globe compared to other energy sources. During peak daylight hours, which typically coincide with the highest electricity demand, solar power plants can significantly contribute to the grid, alleviating stress on electrical networks during these critical periods. By aligning energy production with peak usage times, solar energy provides an efficient solution to meet energy demands while minimizing the need for energy storage or additional grid infrastructure. Wind energy also plays a crucial role in sustainable power generation. Wind farms have a relatively small land footprint, as the space between turbines can be used for agricultural or recreational purposes. Additionally, offshore wind farms have the potential to generate large amounts of energy and can be located closer to areas with high energy demand, reducing transmission losses and visual impact on land..

Eligible Green Project: Energy Efficiency

Environmental Benefits

Pumped-Storage Power Stations such as pumped hydropower storage has lower greenhouse gas emissions over other energy storage technologies, according to [researchers](#) with the national renewable energy laboratory. On the other hand, large scale batteries storage system help store excess energy generated during periods of low demand and released it during peak demand hours.



This helps maximize the utilization of energy sources and reduces the reliance on traditional power plants during high-demand periods.

Eligible Green Project: Clean Transportation

Environmental Benefits

On one hand, energy and environmental issues are becoming increasingly severe. Vigorously developing new energy vehicles is an effective way to solve energy and environmental problems. Compared with traditional fuel vehicles, new energy vehicles have relatively lower carbon emission per unit of transportation, which is conducive to better promoting low-carbon development in cities. In addition, the new energy vehicle industry is a high-tech emerging industry. Its rapid development will inevitably drive the development of other emerging industries such as maintenance, energy conservation and environmental protection, information technology, parts and supporting infrastructure. At the same time, compared with traditional fuel vehicles, new energy vehicles have low noise during operation. Large-scale promotion of new energy vehicles will greatly reduce urban noise, which has a positive impact on reducing urban noise pollution. In the long run, it will help improve the living environment of urban residents.

Eligible Green Project: Sustainable Water and Wastewater Management

Environmental Benefits

With economic development, urban population continues to grow, urbanization levels continue to increase, and water scarcity issues in many cities are becoming more and more prominent. Sustainable water resources and wastewater management projects, by constructing and installing sewage treatment plants and building supporting sewage collection pipelines, can reduce the possibility of sewage being randomly discharged and polluting groundwater. By collecting and utilizing rainwater and sewage through reuse systems, urban runoff can be reduced, and water use efficiency improved, achieving water resource conservation and water saving. Such projects can effectively alleviate urban drainage pressure, improve water supply capacity, enhance water landscapes, while promoting sustainable water circulation and reuse, effectively reducing combined rainwater-sewage overflows, improving sewage treatment efficiency, and increasing the assurance rate of quality water sources for living and production.

Eligible Green Project: Terrestrial and Aquatic Biodiversity

Environmental Benefits

The implementation of such projects is a necessary means to protect and restore river and lake ecosystems and maintain ecological balance. By carrying out water environment management, dredging waterways, clearing river courses, and treating black and odorous waters, the projects can effectively regulate local river runoff and achieve sustained regulation of local water storage. At the same time, by conducting environmental management of the ecological environment along the river course, such projects are conducive to replenishing water sources around the riverbank and conserving soil and water. In addition, after project construction, the ecological environment will be improved, allowing aquatic vegetation and benthic organisms to recuperate and



reproduce, thus greatly improving water environmental quality. After project completion, there will be no major impact on important habitats such as fish migration channels, and it will be beneficial to downstream aquatic organisms and ecological environment on both banks. It can increase the amount of species resources, enhance biodiversity of communities and the stability of ecosystems.

Eligible Green Project: Climate Change Adaptation

Environmental Benefits

Such projects can effectively cope with floods and waterlogging disasters in aquatic ecosystems by building flood control and disaster mitigation infrastructure, playing a role in flood control and disaster mitigation, avoiding damage to the living environment and people's lives and property in the region caused by flooding, and greatly reducing major losses in manpower, materials and financial resources. This ensures that residents can live and work in peace and stability. In addition, the construction of flood control and disaster mitigation infrastructure is beneficial to optimizing water quality and reducing pollution in aquatic ecosystems. Through long-distance water transfer or medium-, long- and short-term water storage, the water bodies can be fully reoxygenated, thus enriching the potential environmental capacity resources and enhancing biodiversity of aquatic organisms, restoring ecosystem functions. At the same time, by carrying out ecological system protection and restoration of water areas during project implementation, such projects can effectively prevent deterioration of aquatic ecosystems, resolving aquatic ecosystem pollution issues, and further improving local water quality.

Eligible Social Project: Affordable Housing

Social Benefits

The affordable housing built in this type of project aims to provide housing for individuals across various demographics, addressing housing difficulties and contributing to enhanced living conditions. This initiative fosters the development of diverse communities, promoting environmental sustainability, health, and a sense of belonging. Moreover, expediting the construction of affordable housing will not only stimulate related industries but also drive the growth of supply chain industries associated with such projects, thereby creating favorable conditions for future consumption. By prioritizing cost reduction and control in construction, this project significantly impacts livelihood improvement and contributes to societal harmony and stability, benefiting a broad spectrum of individuals and families across China..

Eligible Social Project: Access to Essential Services

Social Benefits

Access to quality healthcare and education can enhance residents' well-being and social equity. Better healthcare can improve health outcomes, and increase life expectancy. This will in turn lead to greater productivity due to healthier citizens, and more social cohesion and trust in the healthcare system. A better education system enhances human capital, leads to better employment prospects, reduce income inequality and poverty.

Appendix

About Lianhe Green



Lianhe Green Development Company Limited ("Lianhe Green") was established in 2023 and is a subsidiary of Lianhe Equator Environmental Assessment Co., Ltd. ("Lianhe Equator") and Lianhe Credit Management Co., Ltd. ("Lianhe Group"). Lianhe Equator is the largest green and sustainable bond/loan certification provider in mainland China. As an external reviewer recognised under the Hong Kong Monetary Authority's Green and Sustainable Finance Grant Scheme, Lianhe Green is headquartered in Hong Kong, mainly responsible for green and sustainable finance certification business in international markets, ESG reporting and consulting, ESG training services, and assist in operating carbon market-related businesses within and outside China.

Lianhe Green aims to become an internationally recognized external verifier for sustainable finance through cooperation with Lianhe Equator's professional and experienced team in this industry. With a goal of "shaping the origin of the earth and sky, and transmitting the civilization of mankind", Lianhe Green is committed to helping Chinese and foreign enterprises demonstrate their determination in sustainable development, and providing investors with independent and objective third-party certification services. It is our mission to leave green and oceans to our future generations.

Scope of Analysis

Lianhe Green was engaged by CUDG to provide an assessment of the company's Sustainable Finance Framework. The assessment is to provide a professional second-party opinion of the compliance of the Sustainable Finance Framework and does not provide any financial indicators or judgement on the investment values of the company's issuance.

Responsibilities

The Company

CUDG's responsibilities are to accept the interviews from Lianhe Green's analytical team, to provide relevant data and institutional documents for the analysis, and to ensure that the data and institutional documents provided are true and effective.

External Reviewer

Lianhe Green's responsibilities are to collect data and documents provided by CUDG. Lianhe Green will review all important data and documents, and issue conclusions. In addition, Lianhe Green will disclose information collected from CUDG and relevant parties to demonstrate whether its Sustainable Finance Framework meets the relevant requirements of the above standards.

Analytical Process

The main aspects of this assessment include the following:

- » Performing a comprehensive review on the persons in charge of the relevant departments to understand the key matters related to CUDG's policies and processes;
- » Review the Sustainable Finance Framework developed by CUDG;
- » Review relevant disclosure reports;
- » Obtain and review appropriate supporting documentation to support key findings.

Solicitation Status

The Second-Party Opinion was solicited and assigned or maintained by Lianhe Green at the request of the company.



Disclaimer

A Lianhe Green SPO is an assessment of the green and sustainable financing frameworks of entities. It is not a credit rating.

Please note that individuals identified in a SPO report are not responsible for the opinions stated therein and are named for contact purposes only. Our report is neither a prospectus nor a substitute for the information assembled, verified and presented to investors by the issuer and its agents in connection with the sale of financial instruments and securities.

Lianhe Green receives compensation from entities and other market participants for conducting this service. None of the aforementioned entities nor its related parties participated in the review process aside from providing information requested by Lianhe Green.

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