



# Beijing Energy International Holding Co., Ltd.

## Second-Party Opinion – Sustainable Finance Framework



Excellent  Good  Aligned  Not Aligned

Pillar	Alignment	Key Drivers
Use of Proceeds	Excellent	<ul style="list-style-type: none"> <li>Sustainable Fitch considers the eligible green projects to have a high environmental contribution since the majority of these projects are fully aligned with the substantial contribution criteria (SCC) for climate change mitigation of international science-based green taxonomies.</li> <li>The social projects are intended to target under-served communities or low-income populations in China's mountainous or rural areas. We deem these populations to be vulnerable and therefore consider the eligible social projects to have a high social contribution.</li> </ul>
Use of Proceeds - Other Information	Excellent	<ul style="list-style-type: none"> <li>We positively view that Beijing Energy International Holding Co., Ltd. (BEIH) plans to allocate over 90% of the proceeds to finance new projects, which would result in high additionality. For refinancing, the lookback period is set at one year. Also, a well-defined exclusion list is included in the framework. These align with market best practices.</li> </ul>
Evaluation and Selection	Excellent	<ul style="list-style-type: none"> <li>BEIH has established a dedicated team of representatives from multiple departments to oversee the project selection and evaluation process, and the board of directors will conduct the final review of the approved projects. We positively view this multi-layered process.</li> </ul>
Management of Proceeds	Excellent	<ul style="list-style-type: none"> <li>The proceeds raised will be tracked and segregated in a separate bank account. Unallocated proceeds will be held in accordance with BEIH's treasury and liquidity management policy, in line with standard market practices. We positively view that financed projects will be removed and replaced if they no longer meet the eligibility criteria.</li> </ul>
Reporting and Transparency	Excellent	<ul style="list-style-type: none"> <li>BEIH has committed to annually disclosing allocation and impact information until the funds are fully allocated, and thereafter in case of any material changes to the allocation. The reporting will be available at the instrument level, which provides more granular information to investors. We also consider its impact metrics to be relevant and measurable.</li> </ul>

Framework Type	Sustainability
Alignment	<ul style="list-style-type: none"> <li>✓ Green Bond Principles 2021 (ICMA), with June 2022 Appendix 1</li> <li>✓ Social Bond Principles 2023 (ICMA)</li> <li>✓ Sustainability Bond Guidelines 2021 (ICMA)</li> <li>✓ Green Loan Principles 2023 (LMA/LSTA/APLMA)</li> <li>✓ Social Loan Principles 2023 (LMA/LSTA/APLMA)</li> </ul>
Date assigned	12 December 2024
See Appendix B for definitions.	

### Relevant UN Sustainable Development Goals

1 NO POVERTY, 4 QUALITY EDUCATION, 7 AFFORDABLE AND CLEAN ENERGY, 8 DECENT WORK AND ECONOMIC GROWTH, 9 INDUSTRY, INNOVATION AND INFRASTRUCTURE, 11 SUSTAINABLE CITIES AND COMMUNITIES, 15 LIFE ON LAND

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## Use of Proceeds Summary – ICMA Categories

<b>Green</b>	<ul style="list-style-type: none"> <li>Renewable energy</li> <li>Clean transportation</li> <li>Energy efficiency</li> <li>Environmentally sustainable management of living natural resources and land use</li> </ul>
<b>Social</b>	<ul style="list-style-type: none"> <li>Socioeconomic advancement and empowerment</li> <li>Employment generation</li> <li>Affordable basic infrastructure</li> <li>Access to essential service</li> </ul>

Source: Sustainable Fitch, BEIH sustainable finance framework 2024

## Framework Highlights

We consider transactions under this sustainable finance framework to be aligned with the ICMA Green Bond Principles (GBP), Social Bond Principles (SBP) and Sustainability Bond Guidelines, as well as the LMA, LSTA and APLMA Green Loan Principles (GLP) and Social Loan Principles (SLP). Our opinion is that the framework’s alignment is ‘Excellent’.

This framework is BEIH’s inaugural sustainable finance framework. It sets out the company’s standards for financing and refinancing projects through sustainable financing instruments (SFIs), and it includes the four core components of the ICMA, LMA, LSTA and APLMA sustainable finance principles: use of proceeds (UoP), evaluation and selection, management of proceeds, and reporting.

Proceeds from the transactions under the framework can be allocated to four green UoP categories of renewable energy, clean transportation, energy efficiency, and environmentally sustainable management of living natural resources and land use; and three social UoP categories of rural revitalisation, affordable basic infrastructure, and access to essential service – education.

Based on our communication with the company, BEIH expects over 85% of the proceeds raised under this framework to be allocated to the renewable energy UoP category, which includes five subcategories of solar power, wind power, hydropower, green hydrogen, and transmission and distribution infrastructure. Furthermore, within the renewable energy UoP category, BEIH expects over 85% of the proceeds to be allocated to solar and wind projects.

We view renewable energy as pivotal to decarbonisation and the clean energy transition, thereby having a substantial contribution to climate change mitigation.

We also expect the clean transportation and energy efficiency UoP categories to contribute to climate change mitigation through various activities, such as the use of zero tailpipe CO<sub>2</sub> emission vehicles, the operation of energy storage facilities and the installation of energy-efficient equipment.

The green UoP category of environmentally sustainable management of living natural resources and land use is targeting natural landscape restoration and soil management. This provides additional environmental benefits of nature protection and restoration alongside the generation of clean energy.

Regarding social UoP categories, BEIH confirmed to us that less than 10% of the proceeds will be allocated to social projects. We expect the social projects will boost economic development and generate employment opportunities in rural areas through the construction of agriculture-PV integrated facilities. Other social projects will improve the quality of life and of education in rural areas.

Coping with climate change and improving the ecosystem, as well as rural revitalisation, are included in China’s 14<sup>th</sup> Five-Year Plan (2021–2025). Therefore, we expect the transactions under this framework to support China’s near-term development strategies. Additionally, the green projects, especially renewable energy, will also contribute to China’s nationally determined goals of peaking GHG emissions by 2030 and reaching carbon neutrality by 2060.

The sustainable finance principles recommend that eligible projects are clearly described in the legal documentation of an SFI. We have only reviewed the sustainable finance framework for

this Second-Party Opinion and have not reviewed any transaction-related legal documents or marketing materials; however, the framework provides a description of eligible projects.

Source: Sustainable Fitch, BEIH sustainable finance framework 2024

### Entity Highlights

BEIH is a clean energy company focusing on electricity generation from solar PV, wind power and hydropower. As of end-2023, the company owned 140 solar power plants, 28 wind power plants, 26 hydropower plants and one energy storage power station; its combined grid-connected installed capacity of 8.58GW reflected a 53.1% year-on-year increase. With the exception of one wind project in Vietnam and two wind projects in Australia, all other projects are located in China.

In 2023, the total electricity generated from renewable sources reached 11,994GWh, which comprised 6,961GWh (58.0%) from solar PV, 2,603GWh (21.7%) from wind power, and 2,430GWh (20.3%) from hydropower. This represented a year-on-year growth of 68.0%.

BEIH aims to reach over 22GW of renewable energy installed capacity by end-2025. We anticipate that the expansion of renewable energy in China will play a crucial role in the clean energy transition of the highest-emitting nation and help mitigate the impact of climate change.

BEIH has been supporting China's near-term goal of achieving 1,200GW of wind and solar power by 2030 (this goal was achieved in July 2024, six years ahead of schedule), as well as the long-term goal of reaching carbon neutrality by 2060.

According to its latest 2023 annual report, BEIH has outlined six major focus areas: wind and solar PV, hydropower, integrated energy that includes energy storage and electric vehicle (EV) charging, gas turbines, green hydrogen, and computing. Additionally, the company is developing a business model to combine clean energy and digital computing, with the aim of creating synergy between the consumption of renewable energy and the increasingly energy-demanding computing sector.

BEIH has been publishing its annual ESG reports since 2016 (covering its performance in 2015). Its latest ESG report, published in early 2024, details the company's environmental and social policies, measures taken to mitigate ESG risks, and key ESG metrics. The ESG report is also verified by an independent third party.

Regarding the UN Sustainable Development Goals (SDGs), we believe BEIH's key business of renewable energy generation makes a significant contribution to SDG 7 (affordable and clean energy).

Source: Sustainable Fitch, BEIH annual report 2023, BEIH ESG report 2023



**Use of Proceeds – Eligible Projects**

**Alignment: Excellent**

**Company Material**

**Sustainable Fitch’s View**

**Renewable energy – solar power**

- Development, investment, operation and management of solar facilities, equipment or components, such as distributed and centralised PV plants, and floating PV.
- Solar power should comply with the criterion of solar facilities operating at life-cycle emissions lower than 100gCO<sub>2</sub>e/kWh, declining to 0gCO<sub>2</sub>e/kWh by 2050.

- We view the renewable energy UoP category as having a positive environmental impact due to its contribution to climate change mitigation and the clean energy transition.
- Based on our communication with the company, BEIH expects solar and wind power projects to account for over 72.3% of the proceeds allocation.
- We understand that over 85% of the total proceeds will be allocated to the renewable energy category, of which over 85% will be specifically designated for solar and wind projects. Also, the solar technologies to be used by BEIH are solar PV, while concentrated solar power will not be financed.
- China is the world’s largest GHG emitter, primarily due to coal combustion. Therefore, expanding renewable energy sources will be pivotal in reducing the country’s overall carbon footprint.
- Solar PV generation produces no direct GHG emissions and minimal pollution during operation, compared to conventional fossil fuels. It is widely recognised as one of the most promising energy sources in the course of the net-zero transition. For instance, the International Energy Agency (IEA) Net Zero Emissions by 2050 (NZE) Scenario projects that solar power will make up 26% of the total energy supply by 2050, making it the single largest energy source.
- Key environmental concerns related to solar PV projects include the life-cycle impacts of solar modules, such as the manufacturing and end-of-life disposal, as well as potential biodiversity impact due to land-use change.
- According to BEIH’s ESG report, the company has a sustainable procurement policy that focuses on environmental protection and pollution prevention. Waste solar panels are currently stored appropriately at the power plants and will be recycled by qualified third parties in compliance with relevant regulations, once available.
- Nonetheless, the specific environmental selection criteria for solar modules are currently lacking.
- The company has committed to abiding by the regulations related to biodiversity protection in the process of project development, construction and operation.
- Regarding taxonomy alignment, the construction and operation of solar PV facilities are an eligible activity under both international and local taxonomies. Internationally, it is an eligible activity under the EU taxonomy’s climate change mitigation objective and there are no SCC for this activity.
- The activity is also covered in the China Green Bond Endorsed Projects Catalogue (GBEPC) under category 3.2.2.2 (construction and operation of solar energy utilisation facilities), and the Hong Kong Taxonomy for Sustainable Finance (HK taxonomy) under the activity of electricity generation using solar PV technology.
- BEIH confirmed to us that it will comply with the requirements on conversion efficiency, decay rate and attenuation rate for solar PV technologies as stipulated in both the GBEPC and the HK taxonomy.
- The activity is also included in the China-EU Common Ground Taxonomy (CGT) under activity D1.1 (electricity generation using solar PV technology), where the SCC are adopted from the GBEPC.





- We view investments in this UoP to contribute to SDG 7, through the increase of the renewable energy share in the energy mix.
- We expect this UoP to be aligned with the renewable energy category of the GBP and GLP.

**Renewable energy – wind power**

- Development, investment, operation and management of wind facilities, equipment or components, such as onshore and offshore wind projects.
- Wind power should comply with the criterion of offshore and onshore wind facilities operating at life-cycle emissions lower than 100gCO<sub>2</sub>e/kWh, declining to 0gCO<sub>2</sub>e/kWh by 2050.
- Wind power also has no direct GHG emissions during operation. The IEA NZE Scenario projects that it will be the second-largest energy source by 2050, after solar power.
- In addition to abiding by the biodiversity regulations, BEIH has also committed to conducting biodiversity risk assessments in wind farms and their surrounding habitats, focusing on the prevention of bird collisions, blocking wildlife migration channels, and habitat loss. The company informed us that comprehensive environmental impact assessments will be conducted for offshore wind projects to mitigate potential environmental impact.
- Wind power also has life-cycle environmental impact occurring during the manufacturing stage and at product end of life. The company applies the same procurement policy for wind power as for the solar power UoP category, with a focus on environmental protection and pollution prevention; and there are no specific criteria for wind turbines and other parts and components. It also appears that there is currently no specific policy on product end-of-life recycling.
- Construction and operation of both onshore and offshore wind facilities are eligible under the EU taxonomy for substantial contribution to the climate mitigation objective and no SCC need to be complied with for this activity.
- The activity is also eligible under the GBEP under category 3.2.2.1 (construction and operation of wind power facilities), the CGT under the activity D1.3 (electricity generation from wind power) and the HK taxonomy under the activity of electricity generation from wind power, without the need to meet any technical criteria.
- We believe this UoP will contribute to SDG 7 and expect it to be aligned with the renewable energy category of the GBP and GLP.



**Renewable energy – hydropower**

- Development, investment, operation and management of hydroelectricity facilities, equipment or components.
- Hydropower should comply with one of the following criteria:
  - run-of-river without artificial reservoir;
  - power density of more than 5W/m<sup>2</sup>; or
  - life-cycle GHG emissions intensity lower than 100gCO<sub>2</sub>e/kWh.
- Hydropower is also one of the most prevalent renewable energy sources, producing zero direct GHG emissions. However, there is a risk of elevated life-cycle GHG emissions due to the release of methane during reservoir creation if not properly managed.
- Therefore, international taxonomies often set requirements regarding the type of hydropower, power density or life-cycle GHG emissions intensity to ensure that the hydropower projects contribute to climate change mitigation. We view positively that BEIH has set eligibility criteria in line with the EU taxonomy SCC for electricity generation from hydropower.
- Specifically, run-of-river hydropower captures natural water flow and does not require extensive land flooding; therefore, it is unlikely to have elevated life-cycle GHG emissions due to methane release. It also has a relatively lower environmental impact compared to impoundment hydropower, as it causes less disruption to ecosystems.
- Hydropower plants with power density above 5W/m<sup>2</sup> are likely to emit not more than 100gCO<sub>2</sub>e/kWh, according to the International Hydropower Association's 2018 Hydropower Status Report. Therefore, they are exempted from carrying out life-cycle GHG emissions assessments.
- The criterion on life-cycle GHG emissions intensity ensures that the hydropower plants will contribute positively to





climate change mitigation by setting a specific threshold. BEIH confirmed to us that the life-cycle GHG emissions assessment will be conducted and calculated using Recommendation 2013/179/EU, ISO 14067:2018, ISO 14064-1:2018 or the G-res tool, which will also be verified by a third party.

- As such, we consider BEIH’s hydropower eligibility criteria to be fully in line with the EU taxonomy SCC.
- Locally, large-scale hydropower facilities are covered in the GBEPCC under category 3.2.2.4 (construction and operation of large-scale hydropower facilities), if they do not have a serious impact on the eco-environment. Also, only the major large-scale hydropower projects listed in the National Renewable Energy Programme and other related programmes are eligible.
- In our view, run-of-river hydropower may not meet the criteria for being classified as a large-scale hydropower plant. Additionally, BEIH has not established criteria for financing hydropower projects that are not included in the national list. Hence, the alignment with the GBEPCC cannot be confirmed.
- Electricity generation from hydropower is covered in the CGT under the activity of D1.5 (electricity generation from hydropower) and the SCC are adopted from the EU taxonomy.
- Hydropower-related activities are not yet covered in the HK taxonomy.
- In China, the construction of hydropower plants with an installed capacity of 1MW or above, or that involves environmentally sensitive zones such as national parks, nature reserves, marine parks and other protected areas, is required to undergo environmental impact assessments to address potential environmental impact.
- BEIH also confirmed to us that it will conduct comprehensive environmental impact assessments to identify and mitigate potential environmental impact.
- The company also informed us that it will minimise population displacement. BEIH will conduct socioeconomic impact assessments for large-scale hydropower plants. The company will provide compensation and resettlement if population displacement is unavoidable.
- We believe this UoP will contribute to SDG 7 and expect it to be aligned with the renewable energy category of the GBP and GLP.

**Renewable energy – green hydrogen**

- Development, investment, operation and management of equipment or components dedicated to producing hydrogen from electrolysis through the sole usage of renewable electricity.

- Hydrogen is a versatile energy carrier with multiple applications that are crucial to the clean energy transition. It can be used in industrial processes, vehicle propulsion, electricity generation and energy storage, among other uses.
- The environmental benefits of hydrogen depend on the production process. Hydrogen produced from fossil fuels without carbon capture, utilisation and storage, which is the most common method currently, is likely to offer little to no environmental benefits.
- We consider the hydrogen produced by BEIH through electrolysis using renewable energy to be environmentally positive, as it is expected to generate low life-cycle GHG emissions.
- We also understand from the company that it will comply with the EU taxonomy SCC for hydrogen manufacturing, although this is not explicitly stated in the framework. Specifically, the hydrogen has to meet the life-cycle GHG emissions threshold of below 3tCO<sub>2</sub>e/tH<sub>2</sub>, calculated and verified according to the requirements stipulated in the EU taxonomy.



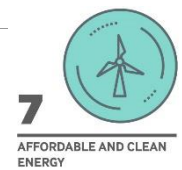


- Separately, hydrogen production is also covered in the GBEPc under category 3.2.2.8 (construction and operation of hydrogen energy utilisation facilities). The facilities are required to comply with the technical (non-GHG related) and safety regulations. BEIH informed us that its facilities will follow the regulations.
- The manufacture of hydrogen is covered in the CGT under activity C2.10 (manufacture of hydrogen) and the SCC are adopted from the EU taxonomy.
- Currently, hydrogen-related activities are not included in the HK taxonomy.
- We believe this UoP will contribute to SDG 7 and expect it to be aligned with the renewable energy category of the GBP and GLP.

Renewable energy – transmission and distribution infrastructure

- Investment in the improvement of existing, or the development or installation of new transmission projects that aim to connect renewable energy sources, support increased deployment of renewables on the grid or reduce GHG emissions through installation of equipment that will improve system efficiency or energy use management.

- Electricity transmission infrastructure is crucial for the clean energy transition. Large-scale, centralised renewable energy projects, such as wind and solar power plants, are often located in remote areas far from urban centres, where electricity demand is relatively low. The construction of transmission lines plays a key role in the supply of low-emission electricity to high-demand areas, and in avoiding curtailment.
- Regarding the installation of equipment that will improve system efficiency or energy use management, BEIH clarified to us that the projects are intended to be related to the equipment to increase the controllability and observability of the electrical power system and enable the development and integration of renewable energy sources, such as sensors and measurement tools for forecasting renewable production.
- We believe these projects help address the intermittency issues of renewable energy, thereby enabling a more stable consumption of renewable energy.
- The construction and operation of the direct connection of the transmission networks to low-carbon electricity generation below the life-cycle emissions threshold of 100gCO<sub>2</sub>e/kWh are aligned with the EU taxonomy SCC. We understand from engagement with BEIH that the connections to the company’s solar PV, wind power and hydropower plants will comply with the SCC.
- The construction and operation of general transmission lines, even those connecting renewable energy sources, are currently not covered under the GBEPc. However, we believe the installation of equipment to improve system efficiency and energy use management will be eligible under category 3.1.1.2 (construction and operation of smart grids).
- Currently, the construction and operation of electricity transmission and distribution are not included in the CGT or the HK taxonomy.
- We believe this UoP will contribute to SDGs 7 and 9 (industry, innovation and infrastructure) through the support for greater renewable energy integration and the development of sustainable infrastructure.
- We also expect this UoP to be aligned with the renewable energy category of the GBP and GLP.



Clean transportation

- Investment in EVs and/or related supporting infrastructure, such as the acquisition of EVs and supporting infrastructure (eg charging stations and hydrogen filling stations), as well as the construction of supporting infrastructure.

- We view the clean transportation UoP category as having a positive environmental impact due to its contribution to climate change mitigation and the low-carbon transition, especially for the transportation sector.
- According to data from the IEA, the transportation sector accounts for about 25% of global carbon emissions, with over 75% of the emissions being from on-road vehicles. Thus, it is crucial for the road transport sector to greatly reduce carbon





emissions to be consistent with global emissions reduction pathways that are in line with the Paris Agreement.

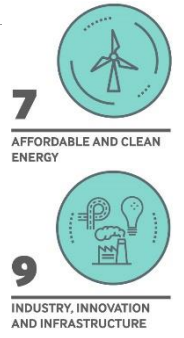
- In the national context, supporting the low-carbon transition through the electrification of transport is especially pertinent, given that vehicle ownership per capita in China presently lags behind that of developed countries and is expected to rise.
- According to the updated data from the World Health Organization and the UN for the period from 2007 to 2017, in May 2024, China had around 210 vehicles per 1,000 people, compared to 863 in the US and 642 in Japan. Unlike those countries where vehicle ownership is nearly saturated and carbon emissions are on a downward trend, China faces persistent challenges in reducing transport emissions.
- We expect the activities under this UoP category, including the acquisition of EVs as well as the acquisition and construction of EV charging stations and hydrogen filling stations, to aid in the transition to cleaner transportation.
- The company confirmed to us that it will only finance battery electric passenger vehicles and light commercial vehicles with zero tailpipe CO<sub>2</sub> emissions. Zero tailpipe emissions vehicles contribute more significantly to climate change mitigation than hybrid vehicles, which still have some levels of tailpipe emissions.
- We also favourably view that the electricity in the charging stations and the hydrogen in the hydrogen filling stations are generated or produced by the company from renewable sources.
- We consider clean transportation solutions, including the acquisition of EVs, EV charging stations and hydrogen filling stations, as well as the construction of related supporting infrastructure, to be aligned with the EU taxonomy SCC, as they support the electrification of transport, are dedicated to the operation of vehicles with zero tailpipe CO<sub>2</sub> emissions, and are not dedicated to the transport or storage of fossil fuels.
- The acquisition of EVs with zero tailpipe emissions is included in the HK taxonomy under the activity of construction and operation of personal mobility devices, cycle logistics, and meets its criteria and thresholds. The activity is not included in the GBEP and CGT.
- The construction of supporting infrastructure such as hydrogen filling stations and EV charging stations is covered in the GBEP under categories 3.2.2.8 (construction and operation of hydrogen energy utilisation facilities) and 5.5.4.1 (construction and operation of charging, battery replacement, hydrogen refuelling and gas refuelling facilities); and in the CGT under the activity of F2.1 (infrastructure enabling low-carbon road transport). The activity is not included in the HK taxonomy.
- We view investments related to clean transportation to contribute to SDG 11 (sustainable cities and communities) by decarbonising the transport sector and thereby reducing air pollution. We expect this UoP category to be aligned with the clean transportation category of the GBP and GLP.





**Energy efficiency**


- Development, investment, operation and management of renewable energy storage facilities, equipment or components.
- Projects related to the upgrade of existing facilities, equipment, systems and technology that would lead to improvement in energy efficiency. Examples include:
  - LED lighting and systems for energy management, such as smart grid and smart metering.
- We view the energy efficiency UoP category as having a positive environmental impact due to its contribution to climate change mitigation and the low-carbon transition.
- Regarding the eligibility criterion for energy storage-related projects, BEIH confirmed to us that it will solely finance projects related to battery energy storage.
- We consider battery energy storage systems to be essential infrastructure that enables the increased adoption of renewable energy. They solve the intermittency issue associated with renewable energy by storing surplus energy generated during peak production periods and releasing it during times of low production or high demand. The wide deployment of battery energy storage systems can ensure a stable and reliable supply of renewable electricity.
- Construction and operation of battery energy storage systems are eligible under the EU taxonomy, the GBEPCC under category 3.2.3.2 (operation and construction of energy-efficient storage facilities) and the CGT under activity D1.8 (storage of electricity). There are no SCC or requirements for battery (electrochemical) energy storage.
- Energy storage is not yet covered by the HK taxonomy.
- The second eligibility criterion is related to projects that contribute to energy efficiency. BEIH confirmed to us that only LED lighting and systems for energy management will be financed based on the current framework.
- BEIH communicated to us that it will follow the requirement stipulated in GBEPCC's category 1.1.3.1 (renovation of green lighting) and only finance LED lighting that meets Level One (the highest level) of the national standards, such as the Energy Efficiency Limits and Energy Efficiency Grades of LED Products for Indoor Lighting (GB 30255). Therefore, we expect the LED lighting to have a high energy-saving performance.
- Installation of energy-efficiency equipment, including light sources, is an eligible activity under the EU taxonomy. However, the SCC include compliance with certain EU regulations that we deem to be non-applicable to BEIH.
- Green lighting upgrade is an eligible activity under the activity of F3.1 (green lighting upgrades) of the CGT and there are no specific SCC as long as it is related to LED lighting upgrades.
- Energy-efficiency lighting is not yet included in the HK taxonomy.
- Regarding smart grid and smart metering, BEIH confirmed to us that eligible projects under this UoP category are related to general electricity consumption management, compared to the activities covered in the transmission and distribution UoP category, where the eligible projects are focused on renewable energy management.
- According to the IEA, a smart grid is an electricity network that uses digital technologies, sensors and software to better match the supply and demand of electricity in real time. Smart meters, which are electronic devices that form an important component of smart grid technologies, provide real-time information on electricity consumption to both utilities and consumers.
- We expect these energy management systems to potentially support greater energy efficiency. Nonetheless, more detailed disclosures on the intended and specific applications will allow a more in-depth assessment of the impact.
- Installation of smart meters for electricity is an EU taxonomy eligible activity and there are no specific SCC for this activity.





	<p>Investments related to smart grid technologies also potentially enable greater energy efficiency.</p> <ul style="list-style-type: none"> <li>• However, smart grid is a general term for various grid management technologies and more information on the specific types of smart grid facilities constructed or operated would enable a better assessment of their alignment with specific EU taxonomy-eligible activities.</li> <li>• We expect the smart grid and smart metering activities to be eligible activities under GBEP's categories 3.1.1.2 (construction and operation of smart grids), and potentially 5.1.1.2 (operation and upgrade of urban power facilities into smart power facilities) and 6.2.1.3 (power demand-side management services).</li> <li>• Energy management systems are currently not covered under the CGT and the HK taxonomy.</li> <li>• We believe this UoP category will contribute to SDGs 7 and 9 through stabilising the renewable energy supply and the development of sustainable infrastructure. This UoP category aligns with the energy-efficiency category of the GBP and GLP.</li> </ul>
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**Environmentally sustainable management of living natural resources and land use**

<ul style="list-style-type: none"> <li>• Investments in or expenditures on projects that promote the restoration of site and soil conservation, such as tree planting, implementing slope protection and constructing diversion channels.</li> </ul>	<ul style="list-style-type: none"> <li>• We view the environmentally sustainable management of living natural resources and land use UoP category as having a positive environmental impact due to its contribution to natural environment protection.</li> <li>• The proposed projects under this UoP category include tree and grass planting, and water and soil conservation initiatives.</li> <li>• Examples include the Qingshuihe power plant water and soil restoration project, where BEIH invested in the cultivation of alfalfa grass in the PV field area that has been subject to long-term erosion. The company is expecting the growth of alfalfa grass to effectively combat wind erosion, reduce land degradation and prevent soil erosion. We understand from the company that this project is an example of current projects; similar projects will be financed by instruments issued under this framework.</li> <li>• Preservation and restoration of natural landscapes, through tree and grass planting, can contribute to climate change mitigation by maintaining or increasing carbon-sequestering ecosystems such as forests. In addition, restoration efforts can improve soil quality, leading to healthier soils that are more productive and resilient; as well as improve water quality by reducing erosion and sediment runoff into water bodies.</li> <li>• Soil erosion and land degradation are pressing environmental issues in China, affecting large areas of the country and having significant economic, agricultural and ecological impact. For example, the total soil erosion area in China has reached 3.56 million square kilometres, accounting for 37% of the total area covered, and according to a study published in the Alexandria Engineering Journal in 2022, the country is estimated to be losing around 5 billion tonnes of soil annually due to erosion.</li> <li>• We believe the example projects qualify as eligible activities in the EU taxonomy for making a substantial contribution to the biodiversity objective, specifically in the category of conservation, including restoration of habitats, ecosystems and species.</li> <li>• The taxonomy requires such projects to maintain good condition of ecosystems, species or habitats, or restore ecosystems or habitats towards good condition; have an initial description of the area; have a management plan; be audited by independent third-party verifiers; have a</li> </ul>	 <p><b>15</b> LIFE ON LAND</p>
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	<p>guarantee of permanence; and meet other minimum requirements.</p> <ul style="list-style-type: none"> <li>• The company confirmed to us that the projects to be financed will comply with the EU taxonomy SCC; we positively view this, as it gives assurance that the projects will deliver the expected environmental benefits.</li> <li>• The projects are also included in the GBEPIC under category 4.2.2.3 (carbon sequestration forest, tree and grass planting and seedlings, and ornamental flowers), without the need to meet any technical criteria. They are not included in the CGT and the HK taxonomy.</li> <li>• We view investments in this UoP category to contribute to SDG 15 (life on land), through the protection and restoration of the natural environment.</li> <li>• We expect this UoP category to be aligned with the environmentally sustainable management of living natural resources and land use category of the GBP and GLP.</li> </ul>
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**Rural revitalisation**

<ul style="list-style-type: none"> <li>• Investment or expenditure related to industrial development integration projects that could improve socioeconomic development through enhancing employment generation, increasing income and empowering businesses in rural areas. Examples include:             <ul style="list-style-type: none"> <li>– agricultural-PV complementary distributed power plants;</li> <li>– animal husbandry-PV complementary distributed power plants; and</li> <li>– fishery-PV complementary distributed power plants.</li> </ul> </li> <li>• The target population includes the under-served communities or low-income population as defined by local government, who are residing in China’s mountainous or rural areas.</li> </ul>	<ul style="list-style-type: none"> <li>• We view the rural revitalisation UoP category as having a positive social impact due to its contribution to socioeconomic development in rural areas.</li> <li>• The three example projects have business models that combine distributed solar PV systems with agriculture, fishery and animal husbandry, a practice collectively known as agrivoltaics.</li> <li>• Typically, activities of crop cultivation, fisheries and animal husbandry are carried out underneath solar panels. In addition to optimising the use of space, agrivoltaics create synergies for both electricity generation and agricultural activities.</li> <li>• Specifically, solar panels provide shading to crops, fish and animals, and alter the microclimate underneath them. For crop farming, this shading can reduce evaporation, maintain soil humidity and protect crops from extreme heat. Similarly, for fisheries, the shading effect helps reduce surface water temperature.</li> <li>• Studies have found that shading and reduced temperature could potentially increase crop and fishery yields; however, it is important to select compatible crops and fish species.</li> <li>• The correlation between livestock yield and shading provided by solar PV is less well-established compared to crops and fisheries. However, there are general benefits in relation to animal welfare, such as providing shading to reduce heat stress and shelter for harsh weather.</li> <li>• In turn, agrivoltaics also benefit electricity generation, as the vegetation or water provides cooling to solar panels, potentially increasing their efficiency.</li> <li>• Based on our engagement with BEIH, its agrivoltaic activities are operated under the lease model. Specifically, farmers or local governments lease their land to BEIH to develop and operate distributed solar PV systems, while farmers can carry out agricultural activities without any charge. Furthermore, BEIH also hires local residents to maintain site operations, creating employment opportunities.</li> <li>• We consider the defined target population to be vulnerable. BEIH confirmed to us that agrivoltaic power plants are typically located in rural areas, where the population is likely to have a low income level.</li> <li>• BEIH also provided to us information on several existing projects in Qujing city, Tangshan city, Baise city and Lanzhou city. These projects are situated in impoverished areas and have created social benefits for the local people; nonetheless, the reporting on social benefits is mainly qualitative. These</li> </ul>	 <p><b>1</b> NO POVERTY</p>  <p><b>7</b> AFFORDABLE AND CLEAN ENERGY</p>  <p><b>8</b> DECENT WORK AND ECONOMIC GROWTH</p>
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projects are examples of current projects; similar projects will be financed by instruments issued under this framework.

- Overall, we deem this UoP category to contribute to various SDGs, including SDGs 1 (no poverty), 7 and 8 (decent work and economic growth), through the integration of solar PV power facilities and agriculture in rural areas.
- We believe this UoP category aligns with the employment generation, and socioeconomic advancement and empowerment categories of the SBP and SLP.

**Affordable basic infrastructure**

- Investment or expenditure related to providing safe, affordable and inclusive infrastructure, such as access to electricity and transportation.
- The target population includes the under-served communities or low-income population as defined by local government, who are residing in China's mountainous or rural areas that lack adequate infrastructure such as renewable energy facilities.

- We view the affordable basic infrastructure UoP category as having a positive social impact due to its contribution to increasing access to essential infrastructure and services, and enhanced connectivity in remote areas.
- Renewable energy projects in mountainous or rural areas improve the access to clean energy for off-grid or rural communities; the company confirmed that these projects have a specific target population and do not overlap with those under the renewable energy UoP category. Renewable energy mitigates the harmful effects to human health from pollution caused by fossil fuel energy sources.
- Various sources, including the World Bank, the IEA and the National Bureau of Statistics of China, reported near-universal electrification rate in China; however, the country still generates the majority (around 70%) of its electricity from fossil fuels.
- Rural areas typically have less diverse energy sources, including lower penetration of renewable energy. Correspondingly, China's rural electrification programmes have increasingly integrated renewable energy solutions such as solar and small-scale hydropower; hence, we view this UoP as supporting these efforts.
- In addition, we expect the construction of both expressways and ancillary roads for the power plants to improve road infrastructure, and promote connectivity and accessibility between local communities.
- Given that the target population is the low-income and under-served communities that lack access to electricity or transportation, we consider this UoP to improve the quality of life for the vulnerable populations.
- We view them as vulnerable because, in addition to being economically disadvantaged, the lack of connectivity and access to electricity could potentially lead to isolation, making it difficult for them to access essential services such as medical and educational facilities, seek employment and engage with the broader community.
- The company communicated that the road infrastructure will be accessible to the local communities at no cost; this potentially increases the positive social impact. However, further information on how the company intends to ensure affordability of the electricity services, and whether there will be any additional support for the neediest individuals or families within this broad target population, would enable a more precise understanding of the expected social outcomes.
- We view this UoP category to support SDGs 1, 7 and 11 for improving access to basic services such as clean energy and transportation. We expect this UoP category to be aligned with the affordable basic infrastructure category of the SBP and SLP.





Access to essential service – education

- Investment in or expenditure on projects related to education and training with a focus on advancing opportunity and equity for the disadvantaged populations.
- The target population includes the under-served communities or low-income population as defined by local government, who are residing in China’s mountainous or rural areas with limited access to basic education.

- We view the access to essential service UoP category as having a positive social impact due to its contribution to socioeconomic empowerment of low-income or under-served populations.
- This is particularly relevant in China, where social and economic factors have contributed to some differences in educational development between urban and rural areas.
- The allocation of public education resources in China has traditionally been influenced by the “hukou” system, where school-age children with agricultural hukou receive education in rural areas, and those with non-agricultural hukou receive education in urban areas. Children with agricultural hukou who wish to access urban public education may face certain restrictions.
- The gap between urban and rural education has narrowed rapidly as a result of government reforms and initiatives since 2000. We consider this UoP as contributing to narrowing the urban-rural gap in educational development.
- Improving access to quality education for the target population yields social benefits that include enhanced socioeconomic development through increased knowledge, skills and qualifications; reduced inequality by enabling social mobility for disadvantaged groups; and higher level of civic engagement and social cohesion.
- The company communicated that it has identified, or will be identifying, specific education-related projects to be financed. Proceeds will be allocated to these projects through donations to charitable organisations, such as the Beijing Red Cross Foundation, and not directly to the projects for regulatory purposes.
- Examples include contribution to the Baoshan Education Development Fund Pool to support the high-quality development of education in Baoshan city, Yunnan, through a donation to the Beijing Road Cross Foundation. Other similar projects will also be financed by instruments issued under this framework.
- The company has also identified low-income and under-served groups in rural areas with limited access to basic education as its target population for the projects. We consider this identified target population to be vulnerable.
- However, similar to the affordable basic infrastructure UoP, further information on whether there will be any additional support for the neediest individuals or families within this broad target population would enable a more precise understanding of the expected social outcomes.
- We deem projects related to education to contribute to SDGs 1 and 4 (quality education), as educational projects provide opportunities for upskilling and improvement in employment prospects.
- We expect this UoP category to be aligned with the access to essential services category of the SBP and SLP.



Source: BEIH sustainable finance framework 2024, company engagement materials

Source: Sustainable Fitch

## Use of Proceeds – Other Information

### Company Material

- BEIH intends to allocate an amount equivalent to the net proceeds from the SFIs for the financing and/or refinancing of eligible sustainability projects, with a maximum one-year lookback period before the issuance year of the SFIs.
- On a best-efforts basis, BEIH will fully allocate the net proceeds of the SFIs within three years from the issuance date.
- BEIH has established a set of criteria preventing projects and/or activities that are considered to have potential negative social or environmental impact to be earmarked as eligible sustainability projects. Such exclusion list includes, but is not limited to, the following:
  - projects related to the development, operation and maintenance of new or existing fossil fuel-based electricity generation capacity or heating systems, including but not limited to, coal, oil or natural gas-powered assets;
  - projects related to the nuclear energy production or trade of nuclear fuel;
  - projects related to trade and production of conflict minerals;
  - projects related to the production of palm oil;
  - projects related to the production or trade of alcoholic beverages;
  - projects related to the production or trade of tobacco products;
  - projects related to the production or trade of weapons, ammunition and military fighting vehicles; and
  - gambling related activities.

Source: BEIH sustainable finance framework 2024

## Alignment: Excellent

### Sustainable Fitch's View

- BEIH informed us that it has committed to allocating over 90% of the proceeds to financing new projects, with a similar proportion dedicated to long-term capital assets. We view new activities and long-term capital assets more positively, as it offers higher additionality and duration of impact.
- BEIH has committed to a maximum lookback period of one year for refinanced projects. This commitment is more ambitious than the standard market practice of a three-year lookback period.
- We also positively view the presence of an exclusion list, particularly the exclusion of fossil fuel-based electricity and heating generation, which is relevant to its power-related operations. The excluded activities are generally associated with high GHG emissions, high resource consumption, pollution, ecosystem disruption and negative social impact.

Source: Sustainable Fitch

## Evaluation and Selection

### Company Material

- The process for project evaluation and selection ensures that the amount equal to the net proceeds of the SFIs is allocated to investment or expenditure that meet the eligibility criteria as defined in the UoP section of the framework.
- To ensure the allocations are made to eligible sustainable categories as specified in the UoP section, BEIH has established a dedicated sustainable finance working group (SFWG) to oversee the selection of eligible sustainable projects and their compliance with the eligibility criteria. The strategic investment department in the SFWG will be responsible for sourcing the list of eligible sustainable projects for the SFWG's approval. The SFWG will meet on an annual basis or whenever necessary.
- The SFWG is composed of representatives from the following departments with the required level of expertise and seniority: equity financing department, financial management department, strategic investment department and engineering management department.
- The SFWG is responsible for:
  - reviewing and validating the existing pool of eligible sustainable projects;
  - replacing eligible sustainable projects that no longer meet the eligibility criteria due to divestment, liquidation and concerns regarding ESG risks or alignment with eligibility criteria, among other factors;
  - reviewing, validating and approving new investments or projects to be included in the eligible sustainable projects pool;
  - verifying and validating annual reporting regarding SFIs in terms of impact and allocation; and
  - identifying material ESG risks and conducting due diligence through controversy review on sustainable projects.
- The SFWG will adhere to BEIH's internal policies and procedures to identify and manage environmental and social risks associated with

## Alignment: Excellent

### Sustainable Fitch's View

- We consider the company's framework to have a clearly outlined process for project identification, evaluation and selection, and to be aligned with the ICMA, LMA, LSTA and APLMA principles.
- It is positive from an ESG perspective that the SFWG, which governs all issuances under the framework, has representation from different functions, as this provides a mix of expertise and perspectives to ensure that balanced decisions are made.
- There is no dedicated sustainability team in the company; however, we understand through engagement with BEIH that its management and business leaders are generally equipped with sustainability expertise. In our opinion, having experts in sustainability topics in the project evaluation and selection process would help ensure that the projects align with the company's overall sustainability strategy and have a net-positive sustainability impact.
- The strategic investment department within the SFWG will be responsible for project selection, while the SFWG is responsible for project approval. The list of approved projects will be submitted to the board of directors for review; the board may reject or raise concerns for any of the approved projects. We consider this to align with best practice, as the multi-layered process that involves different individuals adds assurance that the projects meet the objectives of the framework.

## Evaluation and Selection

**Alignment: Excellent**

### Company Material

### Sustainable Fitch's View

financed projects. BEIH will ensure that all eligible sustainable projects comply with relevant domestic and international laws and regulations.

- The SFWG will at all times oversee the compliance of selected projects in terms of eligibility and compliance with exclusion criteria. If there is any material environmental and/or social controversy or adverse effect from the eligible sustainable projects identified after the allocation of proceeds, such projects will become ineligible for allocation.

Source: BEIH sustainable finance framework 2024

Source: Sustainable Fitch

## Management of Proceeds

**Alignment: Excellent**

### Company Material

### Sustainable Fitch's View

- Net proceeds raised from any SFI will be managed by BEIH's treasury team. Such proceeds will be credited to a separate account in BEIH's books, known as its sustainable account. Sustainable financing proceeds credited to the sustainable account will be allocated to BEIH's sustainable project portfolio in respect of financing eligible projects approved by the SFWG.
- The sustainable account will contain the following information:
  - SFI issuances: instrument type, issuance date, maturity date, currency, allocation amount, etc; and
  - list of eligible sustainable projects: eligible categories, amount, types of the project, project description; allocation of proceeds by eligible categories; and amount of unallocated proceeds.
- Eligible sustainable projects shall qualify for refinancing with a maximum one-year lookback period before the issuance year of the SFI. On a best-efforts basis, BEIH will fully allocate the net proceeds of the SFI within three years from the issuance date.
- Pending allocation, the unallocated proceeds will be held in accordance with BEIH's treasury and liquidity management policy. The unallocated proceeds can be kept in cash or invested in cash equivalent, money market instruments, or other equivalent short-term and liquid instruments until the allocation to eligible sustainable projects.
- As long as the SFI remains outstanding, the balance of net proceeds will be adjusted to match allocations to eligible sustainable projects. BEIH will reallocate proceeds to other eligible sustainable projects in case of divestments or if any eligible sustainable projects no longer meet the eligibility criteria, or if there is any material environmental and/or social controversy.
- BEIH is committed to positioning itself as an advocate to support the development of the sustainable finance market. BEIH has established a dedicated set of rules to ensure complete transparency regarding the SFI's proceeds management:
  - when an eligible sustainable project earmarked for allocation to an SFI is subjected to equity consolidation, such as joint investment or joint venture, and is not fully consolidated, BEIH will only consider the prorated share (%) of investment; and
  - the amount that can be allocated to an eligible sustainable project is established after deducting any external funding already provided to these projects.
- If a material issue related to ESG arises after allocation of proceeds to a specific eligible sustainable project, BEIH commits to replacing the project as soon as feasible, as indicated in the process for project evaluation and selection in the project section of the framework.

- We consider the company's segregation of proceeds in a separate bank account as in line with market best practice and the recommendation of the ICMA, LMA, LSTA and APLMA principles to track proceeds in an appropriate manner.
- Setting up a separate bank account prevents the commingling of funds with other financing instruments or other sources of funding within the general account, where proceeds could be used on projects that do not meet the framework's eligibility criteria.
- The ICMA principles require issuers to disclose the intended types of temporary placement for unallocated net proceeds, while the LMA, LSTA and APLMA principles require borrowers to make such information known to lenders.
- The framework states that unallocated proceeds will be held temporarily in cash and cash equivalents or invested in qualified money market products, or other equivalent short-term and liquid instruments. This is in line with standard market practice.
- We positively view the company's commitment for the SFWG to monitor projects during the lifetime of the SFIs and reallocate proceeds to other eligible projects as soon as feasible for projects that no longer meet the eligibility criteria. This gives investors confidence that the UoP would remain compliant with the relevant eligibility criteria in the framework.

Source: BEIH sustainable finance framework 2024

Source: Sustainable Fitch



**Reporting and Transparency**

**Alignment: Excellent**

**Company Material**

- BEIH intends to report on proceeds allocation and impact metrics on an annual basis until full allocation of the SFI proceeds in its annual reports or ESG reports, and thereafter in case of any material change to the allocation. BEIH's annual report and ESG reports will be available on its corporate website.
- The allocation reporting will include the following information:
  - the aggregated allocated amounts to each eligible category;
  - the description on the types of the projects financed;
  - any balance of unallocated proceeds; and
  - the percentage of allocation of net proceeds between financing new projects and refinancing of existing projects.
- Where feasible, BEIH will disclose the relevant information on the expected environmental benefits by eligible categories. Examples of the impact reporting metrics are included in the framework.

**Sustainable Fitch's View**

- We deem the commitment to providing allocation and impact reporting until full allocation, and thereafter in case of material changes, as aligned with market best practice. This commitment ensures transparent information is available to investors throughout the tenors of the SFIs.
- Based on our communication with the company, BEIH will provide allocation and impact reporting for individual SFI. We consider this approach to provide more specific information related to each SFI to investors compared to reporting on an aggregated basis for multiple SFIs.
- BEIH will provide allocation and impact reporting at the UoP category level. This is consistent with standard market practice.
- BEIH provides example impact reporting metrics in the framework, which include installed capacity, annual renewable energy production, annual GHG emissions reduced and annual green hydrogen production for the renewable energy category. We consider the example impact reporting metrics to be relevant and measurable, and they provide clear information on the environmental benefits of the projects.
- Nonetheless, there is no commitment in the framework that BEIH will report on the calculation methodology and assumptions used in the reporting.
- BEIH has not committed to obtaining post-issuance independent verification on its allocation and impact reporting. We view having post-issuance verification to enhance the credibility of the reporting.

Source: BEIH sustainable finance framework 2024

Source: Sustainable Fitch





## Relevant UN Sustainable Development Goals

<ul style="list-style-type: none"> <li>• <b>1.4:</b> By 2030, ensure that all men and women, in particular the poor and the vulnerable, have equal rights to economic resources, as well as access to basic services, ownership and control over land and other forms of property, inheritance, natural resources, appropriate new technology and financial services, including microfinance.</li> </ul>	 <p><b>1</b> NO POVERTY</p>
<ul style="list-style-type: none"> <li>• <b>4.1:</b> By 2030, ensure that all girls and boys complete free, equitable and quality primary and secondary education leading to relevant and effective learning outcomes.</li> <li>• <b>4.5:</b> By 2030, eliminate gender disparities in education and ensure equal access to all levels of education and vocational training for the vulnerable, including persons with disabilities, indigenous peoples and children in vulnerable situations.</li> </ul>	 <p><b>4</b> QUALITY EDUCATION</p>
<ul style="list-style-type: none"> <li>• <b>7.1:</b> By 2030, ensure universal access to affordable, reliable and modern energy services.</li> <li>• <b>7.2:</b> By 2030, increase substantially the share of renewable energy in the global energy mix.</li> <li>• <b>7.3:</b> By 2030, double the global rate of improvement in energy efficiency.</li> <li>• <b>7.b:</b> By 2030, expand infrastructure and upgrade technology for supplying modern and sustainable energy services for all in developing countries, in particular least developed countries, small island developing States, and land-locked developing countries, in accordance with their respective programmes of support.</li> </ul>	 <p><b>7</b> AFFORDABLE AND CLEAN ENERGY</p>
<ul style="list-style-type: none"> <li>• <b>8.3:</b> Promote development-oriented policies that support productive activities, decent job creation, entrepreneurship, creativity and innovation, and encourage the formalisation and growth of micro-, small- and medium-sized enterprises, including through access to financial services.</li> <li>• <b>8.5:</b> By 2030, achieve full and productive employment and decent work for all women and men, including for young people and persons with disabilities, and equal pay for work of equal value.</li> </ul>	 <p><b>8</b> DECENT WORK AND ECONOMIC GROWTH</p>
<ul style="list-style-type: none"> <li>• <b>9.1:</b> Develop quality, reliable, sustainable and resilient infrastructure, including regional and transborder infrastructure, to support economic development and human well-being, with a focus on affordable and equitable access for all.</li> <li>• <b>9.4:</b> By 2030, upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes, with all countries taking action in accordance with their respective capabilities.</li> </ul>	 <p><b>9</b> INDUSTRY, INNOVATION AND INFRASTRUCTURE</p>
<ul style="list-style-type: none"> <li>• <b>11.2:</b> By 2030, provide access to safe, affordable, accessible and sustainable transport systems for all, improving road safety, notably by expanding public transport, with special attention to the needs of those in vulnerable situations, women, children, persons with disabilities and older persons.</li> <li>• <b>11.6:</b> By 2030, reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality and municipal and other waste management.</li> </ul>	 <p><b>11</b> SUSTAINABLE CITIES AND COMMUNITIES</p>
<ul style="list-style-type: none"> <li>• <b>15.3:</b> By 2030, combat desertification, restore degraded land and soil, including land affected by desertification, drought and floods, and strive to achieve a land degradation-neutral world.</li> </ul>	 <p><b>15</b> LIFE ON LAND</p>

Source: Sustainable Fitch, UN



## Alignment with the Hong Kong Taxonomy for Sustainable Finance

The HK taxonomy has one environmental objective: climate change mitigation. It includes 12 eligible economic activities within four sectors that must contribute to this environmental objective: electricity, gas, steam and air conditioning supply; transportation and storage; water supply, sewerage, waste management and remediation activities; and construction.

We assess whether an activity or project category to be financed with sustainable debt is aligned to the HK taxonomy and whether it meets the activity-level SCC defined in the taxonomy. We deem a sustainable finance framework or transaction to be aligned with the HK taxonomy based on eligible activities only, and do not consider social or green activities not yet included in the taxonomy in this assessment.

<b>Use of Proceeds</b>	<b>Renewable energy</b>
<b>Contribution to Environmental Objectives</b>	<b>Climate change mitigation</b> Yes
<b>Compliance with SCC to determine whether economic activity is considered sustainable</b>	<p>Yes. Construction or operation of electricity generation facilities that produce electricity using solar PV technology and wind power are eligible activities. For electricity generation using solar PV technology, the main criteria include minimum photoelectric conversion efficiency for different types for solar cells and decay rate modules, as well as maximum decay rates. BEIH confirmed to us that it will comply with the requirements. There are no criteria that need to be complied with for electricity generation using wind power.</p> <p>Additionally, there are other activities under this UoP category that are not yet included in the taxonomy, including construction or operation of electricity generation facilities that produce electricity from hydropower, manufacturing of hydrogen, and transmission and distribution of electricity.</p>
<b>Use of Proceeds</b>	<b>Clean transportation</b>
<b>Contribution to Environmental Objectives</b>	<b>Climate change mitigation</b> Yes
<b>Compliance with SCC to determine whether economic activity is considered sustainable</b>	<p>Yes. Acquisition of EVs is an eligible activity under the category of construction and operation of personal mobility devices, cycle logistics, which covers the selling, purchasing, financing, leasing, renting and operation of private electric or hydrogen vehicles. The activity meets the first main criterion of having the propulsion of the devices come from a zero-emissions motor. We confirmed with the Hong Kong Monetary Authority that the second main criterion is not applicable to this activity.</p> <p>Additionally, there are other activities under this UoP category that are not yet included in the taxonomy, including the acquisition and construction of EV charging stations and hydrogen filling stations.</p>
<b>Use of Proceeds</b>	<b>Energy efficiency</b>
<b>Contribution to Environmental Objectives</b>	<b>Climate change mitigation</b> n.a.
<b>Compliance with SCC to determine whether economic activity is considered sustainable</b>	n.a.. Installation, maintenance and repair of energy-efficiency equipment is not yet included in the taxonomy.
<b>Use of Proceeds</b>	<b>Environmentally sustainable management of living natural resources and land use</b>
<b>Contribution to Environmental Objectives</b>	<b>Climate change mitigation</b> n.a.
<b>Compliance with SCC to determine whether economic activity is considered sustainable</b>	n.a.. Restoration of natural landscapes is not yet included in the taxonomy.
<p>Note: n.a. - not applicable. Source: Sustainable Fitch</p>	

## Appendix A: Principles and Guidelines

### Type of Instrument: Sustainability

#### Four Pillars

1) Use of Proceeds (UoP)	Yes
2) Project Evaluation & Selection	Yes
3) Management of Proceeds	Yes
4) Reporting	Yes

#### Independent External Review Provider

Second-party opinion	Yes
Verification	No
Certification	No
Scoring/Rating	No
Other	n.a.

#### 1) Use of Proceeds (UoP)

##### UoP as per Green Bond Principles (GBP)

Renewable energy	Yes
Energy efficiency	Yes
Pollution prevention and control	No
Environmentally sustainable management of living natural resources and land use	Yes
Terrestrial and aquatic biodiversity conservation	No
Clean transportation	Yes
Sustainable water and wastewater management	No
Climate change adaptation	No
Certified eco-efficient and/or circular economy adapted products, production technologies and processes	No
Green buildings	No
Unknown at issuance but currently expected to conform with GBP categories, or other eligible areas not yet stated in GBP	No
Other	n.a.

##### Use of Proceeds as per Social Bond Principles (SBP)

Affordable basic infrastructure	Yes
Access to essential services	Yes
Affordable housing	No
Employment generation (through SME financing and microfinancing)	Yes
Food security	No
Socioeconomic advancement and empowerment	Yes
Unknown at issuance but currently expected to conform with SBP categories, or other eligible areas not yet stated in SBP	No
Other	n.a.

#### Target Populations

Living below the poverty line	No
Excluded and/or marginalised populations and/or communities	No
People with disabilities	No
Migrants and/or displaced persons	No
Undereducated	No
Under-served, owing to a lack of quality access to essential goods and services	Yes
Unemployed and/or workers affected by climate transition	No



**Type of Instrument: Sustainability**

Women and/or sexual and gender minorities	No
Aging populations and vulnerable youth	No
Other vulnerable groups, including as a result of natural disasters, climate change, and/or climate transition projects that cause or exacerbate socioeconomic inequity	No
Other	Communities or low-income population as defined by local government, who are residing in China's mountainous or rural areas

**2) Project Evaluation and Selection**

**Evaluation and Selection**

Credentials on the issuer's social and green objectives	Yes
Documented process to determine that projects fit within defined categories	Yes
Defined and transparent criteria for projects eligible for sustainability bond proceeds	Yes
Documented process to identify and manage potential ESG risks associated with the project	Yes
Summary criteria for project evaluation and selection publicly available	Yes
Other	n.a.

**Evaluation and Selection, Responsibility and Accountability**

Evaluation and selection criteria subject to external advice or verification	No
In-house assessment	Yes
Other	n.a.

**3) Management of Proceeds**

**Tracking of Proceeds**

Sustainability bond proceeds segregated or tracked by the issuer in an appropriate manner	Yes
Disclosure of intended types of temporary investment instruments for unallocated proceeds	Yes
Other	n.a.

**Additional Disclosure**

Allocations to future investments only	No
Allocations to both existing and future investments	Yes
Allocation to individual disbursements	Yes
Allocation to a portfolio of disbursements	No
Disclosure of portfolio balance of unallocated proceeds	Yes
Other	n.a.

**4) Reporting**

**UoP Reporting**

Project-by-project	No
On a project portfolio basis	Yes
Linkage to individual bond(s)	Yes
Other	n.a.

**UoP Reporting/Information Reported**

Allocated amounts	Yes
Sustainability bond-financed share of total investment	No
Other	n.a.

**UoP Reporting/Frequency**

Annual	Yes
Semi-annual	No



**Type of Instrument: Sustainability**

Other n.a.

**Impact Reporting**

Project-by-project No

On a project portfolio basis Yes

Linkage to individual bond(s) Yes

Other n.a.

**Impact Reporting/Information Reported (exp. ex-post)**

GHG emissions/savings Yes

Energy savings Yes

Decrease in water use No

Number of beneficiaries Yes

Target populations Yes

Other ESG indicators  
Installed capacity; annual renewable energy production; annual green hydrogen production; number of EVs acquired; number of EV charging stations installed; number of hydrogen filling stations installed; annual contribution in hectares or square metres to land remediated, decontaminated or regenerated; hectares of protected or conserved land

**Impact Reporting/Frequency**

Annual Yes

Semi-annual No

Other n.a.

**Means of Disclosure**

Information published in financial report Yes

Information published in ad hoc documents No

Information published in sustainability report Yes

Reporting reviewed No

Other BEIH corporate website

Note: n.a. - not applicable.

Source: Sustainable Fitch, ICMA

## Appendix B: Definitions

Term	Definition
<b>Debt types</b>	
Green	Proceeds will be used for green projects and/or environmental-related activities as identified in the instrument documents. The instrument may be aligned with ICMA Green Bond Principles or other principles, guidelines or taxonomies.
Social	Proceeds will be used for social projects and/or social-related activities as identified in the instrument documents. The instrument may be aligned with ICMA Social Bond Principles or other principles, guidelines or taxonomies.
Sustainability	Proceeds will be used for a mix of green and social projects and/or environmental and social-related activities as identified in the instrument documents. The instrument may be aligned with ICMA Sustainability Bond Guidelines or other principles, guidelines, taxonomies.
Sustainability-linked	Financial and/or structural features are linked to the achievement of pre-defined sustainability objectives. Such features may be aligned with ICMA Sustainability-linked Bond Principles or other principles, guidelines or taxonomies. The instrument is often referred to as an SLB (sustainability-linked bond) or SLL (sustainability-linked loan).
Conventional	Proceeds are not destined for any green, social or sustainability project or activity, and the financial or structural features are not linked to any sustainability objective.
Other	Any other type of financing instrument or a combination of the above instruments.
<b>Standards</b>	
ICMA	International Capital Market Association. In the Second-Party Opinion we refer to alignment with ICMA's Bond Principles: a series of principles and guidelines for green, social, sustainability and sustainability-linked bonds.
LMA, LSTA and APLMA	Loan Market Association (LMA), Loan Syndications and Trading Association (LSTA) and Asia Pacific Loan Market Association (APLMA). In the Second-Party Opinion we refer to alignment with Sustainable Finance Loan Principles: a series of principles and guidelines for green, social and sustainability-linked loans.
EU Green Bond Standard	A set of voluntary standards <a href="#">created by the EU</a> to "enhance the effectiveness, transparency, accountability, comparability and credibility of the green bond market".

Source: Sustainable Fitch, ICMA, UN, EU Technical Expert Group

## Appendix C: Second-Party Opinion Methodology

### Second-Party Opinion

Second-Party Opinions (SPO) are a way for issuers to obtain an independent external review on their green, social, sustainability and sustainability-linked instruments.

As per the ICMA Guidelines for External Reviewers, an SPO entails an assessment of the alignment of the issuer’s green, social, sustainability or sustainability-linked bond or loan issuance, framework or programme with the relevant principles. For these purposes, “alignment” should refer to all core components of the relevant principles.

Sustainable Fitch analysts vary the analysis based on the type of instruments, to consider whether there are defined uses of proceeds or KPIs and sustainability performance targets. The analysis is done on a standalone basis, separate to the entity.

### Analytical Process

The analysis considers all available relevant information (ESG and financial). The reports transparently display the sources of information analysed for each section and provide a line-by-line commentary on the sub-factors analysed. The ESG analysts working on an SPO will also engage directly with the issuer to acquire any additional relevant information not already in the public domain or in instrument-related documentation.

An important part of the analysis is the assessment of the E and S aspects of the use of proceeds. In addition to the alignment with ICMA Principle and Guidelines, the analysis may also refer to major taxonomies (eg the EU taxonomy for E aspects, and the UN Sustainable Development Goals for S aspects).

Once the analyst has completed the analysis, with commentary for the related SPO, it is submitted to the approval committee, which reviews it for accuracy and consistency. Based on issuer preference and mandate, an SPO can be monitored (annually or more frequently, if new information becomes available) or on a point-in-time basis.

### Scale and Definitions

ESG Framework	
Excellent	Sustainable finance framework and/or debt instrument structure is fully aligned to all relevant core international principles and guidelines. Practices inherent to the structure meet excellent levels of rigour and transparency in all respects and are well in excess of the standards commonly followed by the market.
Good	Sustainable finance framework and/or debt instrument structure is fully aligned to all relevant core international principles and guidelines. Practices inherent to the structure meet good levels of rigour and transparency; in some instances, they go beyond the standards commonly followed by the market.
Aligned	Sustainable finance framework and/or debt instrument structure is aligned to all relevant core international principles and guidelines. Practices inherent to the structure meet the minimum standards in terms of rigour and transparency commonly followed by the market.
Not Aligned	Sustainable finance framework and/or debt instrument structure is not aligned to relevant core international principles and guidelines. Practices inherent to the structure fall short of common market practice.

Source: Sustainable Fitch



## SOLICITATION STATUS

The Second-Party Opinion was solicited and assigned or maintained by Sustainable Fitch at the request of the entity.

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