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Second Party Opinion

Jinan Hi-tech Holding Group Co. Ltd.'s Green Finance Framework

Oct. 20, 2023

Location: China

Sector: Engineering and Construction

Alignment With Principles

Aligned = ✓ Conceptually aligned = ○ Not aligned = ✗

- ✓ Green Bond Principles, ICMA, 2021 (with June 2022 Appendix 1)
- ✓ Green Loan Principles, LMA/LSTA/APLMA, 2023

See [Alignment Assessment](#) for more detail.

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Light
green

Activities representing transition steps in the near-term that avoid emissions lock-in but do not represent long-term low-carbon climate resilient solutions.

Our [Shades of Green Analytical Approach](#) >

Strengths

The framework's reporting includes both expected and actual impact indicators. This adds transparency for investors to assess and monitor the performance of the financed projects.

Weaknesses

No weakness to report.

Areas to watch

Point-based systems of green building certifications do not necessarily require minimum performance improvement thresholds. Considering other comparable standards as eligible, without specifying the certifications or criteria, limits our insight into the projects' potential impact. The issuer expects minimum energy savings for eligible green buildings, which partially mitigates the risk.

Jinan Hi-tech is yet to articulate a plan or initiatives to reduce buildings' lifecycle emissions and indirect exposure to fossil fuels.

Jinan Hi-tech's disclosures are limited, and it is yet to publish a sustainability report. This is common for Chinese local government-owned entities.

Eligible Green Projects Assessment Summary

Eligible projects under the issuer’s green finance framework are assessed based on their environmental benefits and risks, using Shades of Green methodology.

Green Buildings	<div></div> Light green
Acquisition, construction, maintenance, and renovation of buildings that have received, or expect to receive, one of the selected green building certifications.	

See [Analysis Of Eligible Projects](#) for more detail.

Issuer Sustainability Context

This section provides an analysis of the issuer's sustainability management and the embeddedness of the financing framework within its overall strategy.

Company Description

Jinan Hi-tech is a Chinese local government-owned entity established in 2005. It is based in Jinan city of Shandong province, and is wholly owned by the Jinan Municipal People's Government State-owned Assets Supervision and Administration Commission.

The company primarily engages in industrial park and infrastructure construction and operation (17% of Chinese renminbi [RMB] 455 billion revenue, as of March 31, 2023), property development (22%), land development and IT hardware and services (less than 1% combined), and other businesses (61%), notably the trading of coal, iron ore, ethylene glycol, among other commodities, and finished goods.

As of March 31, 2023, the majority of Jinan Hi-tech's gross profit (RMB683 million) came from its trading businesses (41%), through Jigao International Investment Development Co. Ltd. and Shandong Yulong Gold Co. Ltd. (Yulong). Since October 2021, Jinan Hi-tech has acquired a controlling interest in Yulong (with 29% equity shares as of Sept. 30, 2023). Since then, Yulong's revenue has been consolidated into Jinan Hi-tech's total revenue.

Through infrastructure construction and development in the Jinan Hi-tech zone, the company aims to drive the city's growth in innovation, science, and technology. With the construction of green buildings, the Jinan Hi-tech targets to promote and contribute to China's 14th Five-Year Strategic Plan (2021-2025) for a low carbon economy.

Material Sustainability Factors

Climate transition risk

Engineering and construction companies contribute to global climate change mainly through embedded carbon in key materials such as steel and concrete, and the greenhouse gas (GHG) emitted during the project-use phase, levels of which vary widely.

Clients are more focused on lowering their GHG emissions, making climate transition risk an important stakeholder consideration. Entities could be exposed to reputational risks if they participate in the most carbon-intensive projects. Incremental climate-related investments can require significant capital outlays but will potentially reduce the risk of obsolescence due to changes in regulation or climate goals. In addition, low-carbon properties may achieve higher cost efficiencies or attract premium rents in the longer term, therefore enhancing value.

Phasing out coal affects stakeholders by potentially raising electricity prices (as coal is cheap and globally abundant), and because the coal industry is a significant economic contributor in some small localities. The push for an accelerated energy transition translates to weaker demand for coal, and that is spilling into the most energy-intensive segments of the wider industry, especially steel and aluminum. China has national commitments to reach peak carbon emissions before 2030 and achieve carbon neutrality by 2060.

Physical climate risk

Physical climate risk is a material factor because of the potential damage to assets and disruptions to a large number of stakeholders and to operations. Severity of physical risks varies by region, but the fixed nature of construction projects and real estate assets heightens materiality. Chronic risks (increase in precipitation patterns) or acute risks (flooding, thunderstorms, and typhoons) necessitate designing and building infrastructure that is resilient to known and projected climate hazards. Severe weather events can add risks during construction phase. Acute and chronic risks could also damage properties or place tenant health and safety at risk, as well as require investments to manage potential effects or, in severe cases, relocation of tenants.

The likelihood of asset damage due to extreme weather increases without adaptation, more so in regions exposed to climate hazards. Unabated climate change could lead to estimated GDP losses of 0.5% to 2.3% as early as 2030 for China, according to the [World Bank](#). Chinese provinces account for half of the most exposed global spots to extreme weather events by 2050 (source: Sydney-based research firm [XDI](#), as referenced by the [South China Morning Post](#)).

Workforce health and safety

Construction sites can expose workers to heightened safety risks from use of heavy machinery, falls from height, hazardous chemicals, and other potentially dangerous situations, translating into fatality and injury rates that are high relative to other sectors. The reliance on temporary employees and subcontractors also pose risks because safety protocols for such employees can be laxer, compared to those for larger companies that typically have more satisfactory training, policies, and standards.

China has ratified six occupational safety and health international labor conventions. The country has made progress over the last two decades, with total workplace fatalities declining by 83% between 2005 and 2021 (source: International Labor Organization's article in [China Daily](#)).

Issuer And Context Analysis

The framework's green buildings project category aims to address climate transition risk, which is a material sustainability factor (MSF) for Jinan Hi-tech. The projects aim to align with the company's vision to promote and contribute to China's 14th Five-Year Strategic Plan for environmental protection and development of low-carbon economy. Jinan Hi-tech expects certified green buildings to achieve energy savings of 10%-15%. However, this has not translated into any company-wide decarbonization targets, despite having a low-carbon economy being one of Jinan Hi-tech's core sustainability strategies.

Moreover, Jinan Hi-tech's growing commodity trading segment indirectly facilitates the use of coal in high-emitting applications, including coal-fired power plants, which may contribute to slowing down a low-carbon transition. Although the issuer indicated that it has a dedicated team to regularly assess relevant market trends and climate risks, an absence of a concrete transition plan may highlight a persistent and heightening transition risk.

Jinan Hi-tech is yet to disclose its sustainability performance. This limits our insights on the company's agenda to address these MSFs and on how its other activities impact sustainability performance beyond the projects included in this framework. Jinan Hi-tech stated that, as its sustainable development policy has been updated, it will publish a sustainability report on its website, in addition to its commitment to annually disclose the financed projects' actual and expected impact.

Physical risks are important considerations for green buildings. Jinan Hi-tech relies on third-party feasibility studies and environmental impact assessments to establish systems to manage adverse climate impacts to its operations and assets. The company has limited disclosure on how it addresses physical risks in general, beyond compliance with local regulations. This is similar for local government-owned entities in China.

Jinan Hi-tech's green bond framework is not designed to address workforce health and safety, a key sustainability issue for the company. Jinan Hi-tech's strategy and commitments in this regard appear limited to abiding by laws and regulations. Still, the green buildings project commits to adhering to relevant safety regulatory requirements. It mainly relies on feasibility studies, and environmental and social impact assessments to inform, manage, and mitigate social risks. This is a standard procedure for development projects in China.

Alignment Assessment

This section provides an analysis of the framework's alignment to [Social/Sustainability/Green Bond/Loan] principles.

Alignment With Principles

Aligned = ✓ Conceptually aligned = ○ Not aligned = ✕

- ✓ Green Bond Principles, ICMA, 2021 (with June 2022 Appendix 1)
- ✓ Green Loan Principles, LMA/LSTA/APLMA, 2023

✓ Use of proceeds

The framework's green buildings project category is shaded in green. Jinan Hi-tech will allocate an amount equivalent to the proceeds exclusively to finance and refinance eligible green buildings projects. Please refer to Analysis of Eligible Projects section for more information on our analysis of the environmental benefits of the expected use of proceeds. The maximum look-back period for refinanced projects is three years after issuance, in line with market practice.

✓ Process for project evaluation and selection

Jinan Hi-tech' Green Financing Group comprises representatives from the planning and development, finance, capital management, audit, and human resources functions. It will meet annually to discuss and select projects according to the framework's eligibility and exclusion criteria. The company will conduct feasibility studies, and environmental impact assessments to identify and manage environmental and social risks associated with the projects. Shortlisted projects will be presented to the board of directors for approval. Jinan Hi-tech will disclose its risk management approach in its annual report. Eligibility criteria reference the China Green Bond Endorsed Projects Catalogue and to some green building certifications and standards. In determining other equivalent green building standards, Jinan Hi-tech will follow the industry benchmark that is validated by a third-party to ensure comparability with the certifications listed in the framework.

✓ Management of proceeds

The net proceeds of each green financing transaction will be deposited in a dedicated funding account and earmarked for allocation to eligible projects within two years. Jinan Hi-tech will maintain a register to track the allocation of proceeds. The company commits to monitoring the net proceeds of all outstanding transactions, including periodically reallocating proceeds to replacement projects, if some projects cease complying with the framework's requirements. Pending (re)allocation, proceeds will be held in cash deposits.

✓ Reporting

Jinan Hi-tech commits to reporting the allocation of the net proceeds, and the expected and actual environmental impacts of the financed projects. The information will be available annually on the company website or annual report until full allocation of the net proceeds. Jinan Hi-tech will refer to the International Capital Markets Association's (ICMA) Harmonized Framework for Impact Reporting (June 2022) to guide the selection of relevant impact indicators. We view this added transparency commitment as a strong practice.

Analysis Of Eligible Projects

This section provides details of our analysis of eligible projects, based on their environmental benefits and risks, using the "[Analytical Approach: Shades Of Green Assessments](#)".

For each financing under the framework, the issuer expects to allocate about a third of the proceeds to finance and two-thirds to refinancing green buildings projects.

The eligible assets will include assets for which Jinan Hi-tech has commenced operations or has placed-in-service prior to the applicable green financing, unless otherwise noted in the respective financing documents.

Overall Shades of Green assessment

Based on the project category shades of green detailed below, and consideration of environmental ambitions reflected in Jinan Hi-tech's green finance framework, we assess the framework as light green.

Green project categories

Green buildings	
Assessment	Description
<div><div></div>Light green</div>	<p>Acquisition, construction, maintenance, and renovation of buildings that have received, or the company expects will receive, the below recognized green building certifications:</p> <ul style="list-style-type: none">Chinese Green Building Evaluation Label – 1 Star or above (Design / Operations Label)Building Research Establishment Environmental Assessment Method (BREEAM) – Excellent or aboveU.S. Leadership in Energy and Environmental Design (LEED) – Gold or aboveHong Kong BEAM Plus – Gold or aboveBuilding and Construction Authority (BCA) Green Mark – Gold or aboveTechnical Standard for Near-Zero Energy Building (GB/T 51350), that stipulates the technical requirements for the construction of Ultra-Low Energy Consumption BuildingsAny other green building label, that is an equivalent standard of the above <p>Renewable energy and energy efficiency projects will achieve energy savings of at least 10%-15% in Jinan Hi-tech's properties that meet the selected green building certifications.</p> <p>A maximum three-year timeframe would be required for properties/buildings to obtain the green certification under this framework. All eligible properties or buildings will have a pre-design green certification.</p>

Analytical considerations













- Green buildings support climate change mitigation by alleviating GHG emissions associated with energy use. The eligible buildings have to obtain a green building certification during the building pre-design stage and must be certified within three years after construction or renovation is complete. Shorter timeframes reflect stronger market practices. The issuer expects to deploy renewable energy technologies (e.g. solar power) and some energy efficiency equipment in the construction of new buildings.

Light green

Activities representing transition steps in the near-term that avoid emissions lock-in but do not represent long-term low-carbon climate resilient solutions.
[Our Shades of Green Analytical Approach >](#)

- Renovations of certified buildings will achieve at least 10% energy savings. Despite exceeding local standards and applying to already certified buildings, the target does not look that ambitious. This factor is partially mitigated by Jinan Hi-tech's statement to us that its goal is to improve existing buildings' energy performance to qualify for the Ultra-Low Energy Consumption Buildings (ULEB) label under the Technical Standard for Near-Zero Energy Building (GB/T51350-2019). The ULEB label requires thresholds for different aspects, including thermal, energy, load, and comfort index, which will require a minimum 50% energy savings below local energy standards. This goal is not stated in the framework. Furthermore, the timeline and plan are ambiguous.
- The framework does not target the highest certifications. For example, although Jinan Hi-tech anticipates most buildings will obtain Chinese Green Building Evaluation Label 2-star certifications, 1-star label (the lowest ranking) remains an eligible criterion.
- Jinan Hi-tech considers other comparable green building standards as eligible, without specifying the certifications, criteria, or performance thresholds, limiting our insight into these projects' potential impact. The company indicated that it would determine the equivalency of other green building labels based on a benchmark against other regulatory and industry standards, as well as third-party validations.
- Jinan Hi-tech stated that most of the proceeds will fund the construction of new buildings, for which the raw materials have considerable embodied emissions and associated climate impacts. The company mainly relies on the selected certifications to address a given building's environmental impact throughout its life cycle, such as material sourcing, energy, water, and waste management. While some green building certifications offer credit for addressing embodied emissions, their point-based systems imply that the framework's minimum certifications could be achieved without thoroughly addressing this issue. Jinan Hi-tech has indicated that it would focus on water savings, improve energy efficiency, and sustainable material selection during construction, but did not share specific plans.
- Jinan Hi-tech specified that fossil fuel-based heating and cooling systems in buildings will not be eligible. The company also shared that heating, cooling, and lighting of the buildings will rely mostly on electricity sourced from the national grid, which coal still largely dominates (See "[China to raise share of non-fossil fuels in total energy mix to 18.3% in 2023](#)," S&P Global Commodity Insights, April 13, 2023). By deploying renewable alternatives such as photovoltaic panels in building structures, Jinan Hi-tech endeavors to gradually reduce its indirect exposure to fossil fuels, and associated lock-in risks. However, there is currently no concrete plan to increase the renewable mix.
- Green buildings are exposed to physical climate risks, including flooding and thunderstorms in Jinan city, which the third-party feasibility study and environmental impact assessment seem to cover through risk assessment and prevention and control measures. Jinan Hi-tech shared with us that it has historically not been affected by any severe climate events.
- The biodiversity risk appears low because the eligible projects are planned and developed as per the local government's urban infrastructure plan. New construction of buildings will take place on developed or government approved sites, which are concentrated in Jinan city's urban area.

S&P Global Ratings' Shades of Green

Assessments					
 Dark green	 Medium green	 Light green	 Yellow	 Orange	 Red
Description					
Activities that correspond to the long-term vision of an LCCR future.	Activities that represent significant steps toward an LCCR future but will require further improvements to be long-term LCCR solutions.	Activities representing transition steps in the near-term that avoid emissions lock-in but do not represent long-term LCCR solutions.	Activities that do not have a material impact on the transition to an LCCR future, or, Activities that have some potential inconsistency with the transition to an LCCR future, albeit tempered by existing transition measures.	Activities that are not currently consistent with the transition to an LCCR future. These include activities with moderate potential for emissions lock-in and risk of stranded assets.	Activities that are inconsistent with, and likely to impede, the transition required to achieve the long-term LCCR future. These activities have the highest emissions intensity, with the most potential for emissions lock-in and risk of stranded assets.
Example projects					
 Solar power plants	 Energy efficient buildings	 Hybrid road vehicles	 Health care services	 Conventional steel production	 New oil exploration


Note: For us to consider use of proceeds aligned with ICMA Principles for a green project, we require project categories directly funded by the financing to be assigned one of the three green Shades.

LCCR--Low-carbon climate resilient. An LCCR future is a future aligned with the Paris Agreement; where the global average temperature increase is held below 2 degrees Celsius (2 C), with efforts to limit it to 1.5 C, above pre-industrial levels, while building resilience to the adverse impact of climate change and achieving sustainable outcomes across both climate and non-climate environmental objectives. Long term and near term--For the purpose of this analysis, we consider the long term to be beyond the middle of the 21st century and the near term to be within the next decade. Emissions lock-in--Where an activity delays or prevents the transition to low-carbon alternatives by perpetuating assets or processes (often fossil fuel use and its corresponding greenhouse gas emissions) that are not aligned with, or cannot adapt to, an LCCR future. Stranded assets--Assets that have suffered from unanticipated or premature write-downs, devaluations, or conversion to liabilities (as defined by the University of Oxford).

Mapping To The U.N.'s Sustainable Development Goals

Where the Financing documentation references the Sustainable Development Goals (SDGs), we consider which SDGs it contributes to. We compare the activities funded by the Financing to the ICMA SDG mapping and outline the intended linkages within our SPO analysis. Our assessment of SDG mapping does not impact our alignment opinion.

This framework intends to contribute to the following SDGs:

Use of proceeds	SDGs
Green Buildings	<div><p>11. Sustainable cities and communities*</p></div>

*The eligible project categories link to these SDGs in the ICMA mapping.

Related Research

- [China to raise share of non-fossil fuels in total energy mix to 18.3% in 2023](#), April 13, 2023
- [ESG Materiality Map Engineering and Construction](#), Oct. 6, 2022

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Second Party Opinion: Jinan Hi-tech Holding Group Co. Ltd.'s Green Finance Framework

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