S&P Global Ratings

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Second Party Opinion

Feicheng City Assets Management Group Co. Ltd. Green Finance Framework

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Location: China | **Sector:** Engineering and Construction

Alignment With Principles

Aligned = ✓ Conceptually aligned = O 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.

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.

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Strengths

Feicheng City Assets Management Group Co. Ltd. (FCAMG) is committed to aligning with the recommendations of ICMA's Harmonized Framework for Impact Reporting. It will engage an external reviewer on the allocation and impact reporting. Both add transparency for investors to monitor the performance of the financed projects.

Weaknesses

The framework does not specify minimum energy reduction thresholds, which limits insight into the projects' actual climate impact.

Areas to watch

The framework's eligibility criteria lack consistency. One certification requires only some thresholds on thermal, water, sound, and indoor air quality performance, while another requires 50% energy saving beyond local standards. The framework also does not target the most ambitious levels in its certifications.

FCAMG's sustainability disclosures are at an early stage, limiting insight into the company's plans to address material sustainability factors. It is also unclear how the company manages ESG, climate risks, and impacts beyond the projects included in this framework. This is common for Chinese 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	Light green
Construction 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

Established in 2003, FCAMG is wholly owned by Feicheng City State-owned Assets Operation Centre. FCAMG mainly engages in the development, construction, and operation of urban infrastructure, and water supply and sewage treatment in Feicheng City, in the Shandong province of China. FCAMG endeavors to support Feicheng City's positioning as a scientific and technological innovation platform through infrastructure construction and management of the Feicheng Optoelectronic New Material Science and Technology Innovation Industrial Park. The industrial park will support the development of the optoelectronic industry, particularly for light emitting diodes (LEDs), lasers, and optical display applications.

In 2022, most of the company's operating revenue of Chinese renminbi (RMB) 1.2 billion (US$164 million) came from its steel trading businesses (51%), followed by infrastructure construction projects (30%), and water operations (4%). However, most of FCAMG's gross profit came from the infrastructure construction segment (59%), followed by sales of merchandise (13%), water operations (13%), and the steel trading business accounting for less than 3%.

Material Sustainability Factors

Climate Transition Risk

Engineering and construction companies contribute to global climate change largely through embedded carbon in key materials like steel and concrete, and the greenhouse gases (GHG) emitted during the project use phase, which varies 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. China has pledged to reach peak carbon emissions before 2030, and to achieve carbon neutrality by 2060.

Physical Climate Risk

Physical climate risk is a material factor because of potential of 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 heightens materiality. Chronic risks (changes in temperature, increase in precipitation patterns) or acute risks (cold waves) necessitate designing and building infrastructure that is resilient to known and projected climate hazards while severe weather events can add risks during the construction phase. The likelihood of asset damage due to extreme weather increases without adaptation, more so in those regions exposed to climate hazards. Unabated climate change could lead to estimated GDP losses of 0.5%-2.3% as early as 2030 for China, according to the World Bank.

Workforce Health and Safety

Construction sites can expose workers to heightened safety risks from the use of heavy machinery, falls, hazardous chemicals, and other potentially dangerous situations, translating into fatality and injury rates that are high relative to other sectors. Reliance on temporary employees and subcontractors also poses risks because safety protocols can be more lax, compared with larger companies that typically have more satisfactory training, policies, and standards. China has ratified six international labor conventions related to occupational safety and health. The country has made progress over the last two decades, with total workplace fatalities declining by 83% between 2005 and 2021, according to an article in China Daily.

Issuer And Context Analysis

The framework's green building category addresses climate transition risk, which is a material sustainability factor (MSF) for FCAMG. The projects aim to align the company's commitment with China's 14th Five-year Strategic Plan of Environmental Protection and Development of Low-carbon Economy and 2035 long-term goals at the national, provincial, and local levels. FCAMG intends to cut carbon emissions by 30% along its value chain within 15 years. However, there is limited information on the baseline of this target and the scope of the value chain, as well as how it will implement companywide decarbonization.

Physical climate risks are important considerations for construction activities, which contribute most of the company's earnings. Eligible projects will be located inside the Feicheng Optoelectronic New Material Science and Technology Innovation Industrial Park. The Shandong province experienced record low temperatures and heavy precipitation of rain and snow in 2023. Moreover, the province is ranked second in global regions most exposed to extreme weather events by 2050, based on research by Sydney-based XDI. FCAMG is thus highly exposed to physical risks, and relies on third-party feasibility studies and environmental impact assessments to identify and manage any adverse impacts from climate on its operations and assets.

The construction of green buildings may introduce issues in relation to workforce health and safety. FCAMG indicated that it would engage with various stakeholders, including community groups, non-governmental organizations, government agencies, and industry peers to understand, assess, and mitigate potential social risks. These risks cover areas such as employment practices, working conditions, and health and safety management. The company also said it would comply with national requirements and standards regarding occupational health and safety. The company will also conduct scenario-based risk assessment to identify the potential and undesirable social impact of its projects and develop mitigation strategies.

FCAMG's sustainability disclosures are at an early stage. There is limited information on the company's overall governance of the environmental and social considerations that are relevant to its operations. This restricts insight into the company's plans to address material sustainability factors beyond the projects included in this framework. The company is yet to commit on sustainability reporting beyond the expected and actual environmental impacts associated with projects, as mandated by the principles.

Alignment Assessment

This section provides an analysis of the framework's alignment to Green Bond and 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 category is shaded in green, and FCAMG has committed to allocating the net proceeds issued under the framework exclusively to green buildings. Please refer to the Analysis of Eligible Projects section for more information on our analysis of the environmental impacts of the expected use of proceeds. Refinancing of eligible projects will have a maximum lookback period of three years, in line with market practice. FCAMG will disclose the share of financing versus refinancing in the allocation reporting.

✓ Process for project evaluation and selection

The framework outlines the process to select projects. FCAMG has set up a Green Financing Group, comprising representatives from the planning and development, financial management, capital management, audit and supervision, human resources, and general management departments. The group will meet annually to select projects based on the eligibility criteria. The list of proposed projects will then be presented to the board of directors for approval. The framework also maintains exclusion criteria that reference the International Finance Corp.'s Exclusion List.

FCAMG identifies and manages perceived social and environmental risks associated with eligible projects through environmental impact assessments (EIA) and broader feasibility studies. These exercises will identify potential environmental and social risks at all project stages as well as the mitigation measures.

✓ Management of proceeds

The proceeds will be managed by the Green Financing Group and deposited in the company's dedicated funding accounts. FCAMG will maintain a register to keep track of the use of proceeds. The company has also committed to periodically adjusting the net proceeds to match allocations to eligible projects during the time instruments are outstanding. Pending allocation, unallocated proceeds will be held in the form of cash deposits.

✓ Reporting

FCAMG has committed to reporting the allocation of the net proceeds, with a brief description of the invested projects, and both their expected and actual environmental impacts. It will report the information yearly through the company's annual report or on its website until full allocation of the net proceeds. Impact indicators include energy consumption reduction (in MWh or % compared with baselines), avoided GHG emissions (in tCO_2 equivalent), annual energy savings (in MWh per annum), and annual reduction in water consumption (in liters). Furthermore, the issuer is committed to aligning with the recommendations of ICMA's Harmonized Framework for Impact Reporting. It will engage external verifier to provide review on the allocation and impact reporting. Both add transparency for investors to monitor the performance of the financed projects. Post-issuance verification report will be available on its website throughout the tenure of the instruments.

Analysis Of Eligible Projects

This section provides details of our analysis of eligible projects, based on their environmental benefits and risks, using the Shades of Green methodology.

Over the two years following issuance of the financing, FCAMG expects to allocate 100% of the proceeds to green buildings.

Overall Shades of Green assessment

Based on the project category shades of green detailed below, and consideration of environmental ambitions reflected in FCAMG's Green Finance Framework, we assess the framework as light green.

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 >

Green project category

Green buildings

Assessment	Description
Light green	Construction of buildings that have received, or the company expects will receive, the following recognized green building certifications: • Chinese Green Building Evaluation Label – 1 Star or above (Design / Operations Label) • Building Research Establishment Environmental Assessment Method (BREEAM) – Excellent or above • U.S. Leadership in Energy and Environmental Design (LEED) – Gold or above • Hong Kong BEAM Plus – Gold or above • Building and Construction Authority (BCA) Green Mark – Gold or above • Technical Standard for Near-Zero Energy Building (GB/T 51350), that stipulates the technical requirements for the construction of Ultra-Low Energy Consumption Buildings • Any other green building label, that is an equivalent standard of the above

Analytical considerations

- Green buildings support climate change mitigation by potentially alleviating GHG emissions. They also serve other environmental benefits in energy and water efficiency, as well as resource and waste management. However, construction activities introduce other issues such as energy use and emissions associated with building materials and equipment. Physical climate risks are material consideration for buildings, and new construction may also raise biodiversity and land use concerns.
- FCAMG expects to allocate the proceeds to finance or refinance the construction of new buildings projects within the Feicheng Optoelectronic New Material Science and Technology Innovation Industrial Park (manufacturing and office buildings, and research and development centers). The issuer has committed to implementing energy and water saving measures in eligible buildings. However, FCAMG has not set specified energy or water reduction thresholds on eligible stock, other than indicating the targeted certifications will exceed local energy efficiency requirements. This limits our assessment to light green shading.

- The heating and cooling systems in buildings will mainly use electricity instead of fossils fuels. Electricity will be sourced from the national grid, which remains heavily reliant on coal (88%) in Shandong province as per a research paper by the Chinese Academy of Engineering.
- The framework's eligibility criteria show little consistency. For example, despite appearing above local regulations in the environmental requirements to get certified, both the Chinese Green Building Evaluation 1-star certification the lowest ranking) and the Technical Standard for Near-Zero Energy Building (GB/T51350-2019) remain eligible criteria. The former requires only some thresholds for thermal, water, sound, and indoor air quality performance. The latter requires a minimum 50% energy saving beyond local energy standards, which appears more ambitious than the 1-star label. Yet, there is no firm commitment from the issuer to attain the more ambitious certification. Similarly, the framework considers other comparable green building standards as eligible, without specifying the certifications, criteria, or performance thresholds. These factors limit our insight into these projects' potential environmental impacts.
- Raw materials in building construction 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 point(s) for addressing embodied emissions, their point-based systems imply that the framework's minimum certifications could be achieved without thoroughly addressing this issue. As such, certified buildings do not necessarily guarantee low climate impact or highly energy efficient buildings.
- Green buildings are exposed to physical climate risks, including flooding and extreme temperatures. FCAMG addresses the risks through implementing measures recommended by third-party feasibility studies and environmental impact assessments, as well as guidance from the Environmental Protection Bureau of Feicheng City.
- Risks on biodiversity and land use change appear to be low because eligible projects are planned and developed as per government regulations and existing infrastructure framework, and the issuer has confirmed that no greenfield site will be involved. The construction of new building projects will be on previously developed land or government approved sites and will be concentrated in Feicheng City’s urbanized high-tech zone.
- The eligible buildings are required to obtain a green building certification during the building pre-design stage and must be certified within three years after construction or renovation is completed, as per the issuer’s internal policy. Shorter timeframes reflect stronger market practices.

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).

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