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INVESTORS SERVICE

ASSESSMENT
2 February 2023

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Avain Yhtiot Oy

Second Party Opinion – Green Finance Framework Assigned SQS2 Sustainability Quality Score

Summary

We have assigned an SQS2 Sustainability Quality Score (very good) to Avain Yhtiot Oy's (Avain) green finance framework dated January 2023. The company has established its use-of-proceeds framework to finance projects across four eligible green categories, namely green and energy-efficient buildings, renewable energy, energy efficiency, and clean transportation. Avain has described the main characteristics of the sustainable financing instruments within a formalized financing framework that is aligned with the International Capital Market Association's (ICMA) Green Bond Principles 2021 (including June 2022, Appendix 1), and the Asia-Pacific Loan Market Association, Loan Market Association, and Loan Syndication and Trading Association's (APLMA/LMA/LSTA) Green Loan Principles 2021. The framework also demonstrates a high contribution to sustainability.

Sustainability quality score

SQS2

SQS5 Weak | SQS4 Intermediate | SQS3 Good | SQS2 Very good | SQS1 Excellent

Alignment with principles

USE OF PROCEEDS

Overall alignment

Not aligned | Partially aligned | Aligned | Best practices

FACTORS	ALIGNMENT
Use of proceeds	
Evaluation and selection	
Management of proceeds	
Reporting	

Contribution to sustainability

Overall contribution

Poor | Limited | Moderate | Significant | High

Expected impact
Relevance and magnitude

ADJUSTMENTS	
ESG risk management	No adjustment
Coherence	No adjustment

Scope

We have provided a Second Party Opinion (SPO) on the sustainability credentials of Avain's green finance framework, including the framework's alignment with the ICMA's Green Bond Principles 2021 (including June 2022, Appendix 1) and the APLMA/LMA/LSTA's Green Loan Principles 2021. Under its framework, Avain plans to take out use-of-proceeds green loans, and issue use-of-proceeds green bonds, to finance projects across four green categories, as outlined in Appendix 2 of this report.

Our assessment is based on Avain's Framework dated 11 January 2023, and our opinion reflects our point-in-time assessment of the details contained in this version of the framework, and other public and nonpublic information provided by the company.

We produced this SPO based on our Framework to Provide Second Party Opinions on Sustainable Debt, published in October 2022.

Issuer profile

Avain Yhtiot Oy (Avain) is a Finnish real estate investment company headquartered in Helsinki, Finland. Avain and its subsidiaries plan, develop, construct, and manage apartment buildings across major Finnish cities. Avain's business model spans the entire value chain from land acquisition to housing design, construction and maintenance. In addition, Avain founded a subsidiary in 2022 named Tenel Oy, which manufactures sustainable concrete elements that are used in Avain's buildings. In 2021, total revenue at Avain was €116 million and investments amounted to €177.9 million, of which €138.3 million was allocated to new construction and €38.5 million to modernization and renovation. In 2021, the company completed just over 900 new apartments, bringing the total number of apartments under its management to 10,197. The company's sustainability strategy envisages working toward a green economy, mitigating climate change. This comprehensive strategy also includes taking responsibility for employees by providing high-quality and comprehensive occupational health care, residents by offering safe and reasonably priced homes that respect cultural heritage of residential area and sustainable cities, and a commitment to transparent reporting. The company has a long-term goal to be carbon neutral by 2035, measured in terms of the greenhouse gas (GHG) emissions associated with the energy use of its properties.

Strengths

» The new and existing building for the green and energy efficient building eligible category will follow the substantial contribution criteria of the EU Taxonomy

» The new buildings to be financed will be at least 10% more energy-efficient (measured by primary energy demand) than the requirement for nearly zero energy buildings (NZEBs) in Finland

» Use of geothermal energy to efficiently heat new buildings

» Relevant and measurable environmental benefits for all categories, and transparent and thorough process for evaluation and selection of projects

Challenges

» The renewable energy and energy efficiency categories do not specify technical criteria, thereby making it difficult to determine whether the best available technologies will be used.

» The green and energy efficient buildings eligible category focuses on construction of new buildings rather than the renovation of older ones, which would entail lower life-cycle emissions.

Alignment with principles

Avain's green finance framework is aligned with the four core components of the ICMA's Green Bond Principles 2021 (including June 2022 Appendix 1) and the APLMA/LMA/LSTA's Green Loan Principles 2021:

- ☑ Green Bond Principles (GBP)
- ○ Social Bond Principles (SBP)
- ☑ Green Loan Principles (GLP)
- ○ Social Loan Principles (SLP)
- ○ Sustainability-Linked Bond Principles (SLBP)
- ○ Sustainability Linked Loan Principles (SLLP)

Use of proceeds

Not aligned	Partially aligned	Aligned ▼	Best practices

Clarity of the eligible categories – ALIGNED

Avain has clearly communicated the nature of the expenditures, and detailed eligibility criteria for nearly all categories, as well as exclusion criteria. The eligibility criteria for "energy efficiency" are broadly defined. The location of projects has been defined to be in Finland, with projects to be located mainly in the Greater Helsinki region and other major Finnish cities. The framework includes descriptions of the eligible projects to be financed, and additionally, the company has specified that the green projects in the green and energy efficient buildings category will comply with the substantial contribution criteria contained in the EU Taxonomy Climate Delegated Act, thus constituting a reference to stringent, internationally recognized technical thresholds.

Clarity of the environmental or social objectives – BEST PRACTICES

Avain has clearly outlined climate change mitigation as the environmental objective associated with its four eligible categories, which is relevant to the eligible projects and coherent with recognized international standards. The framework has referenced the United Nations' (UN) Sustainable Development Goals (SDGs) and associated targets, as well as environmental objectives in the EU Taxonomy, in its articulation of eligible category objectives.

Clarity of expected benefits – ALIGNED

Avain has clearly identified relevant environmental benefits for all four eligible categories. The benefits appear measurable for all eligible categories. Avain has committed to limit the look-back period for refinanced projects to two years in internal documentation. Although the issuer has disclosed an estimate of the share of refinancing, the issuer has not committed to disclose the estimated share of refinancing before each bond issuance.

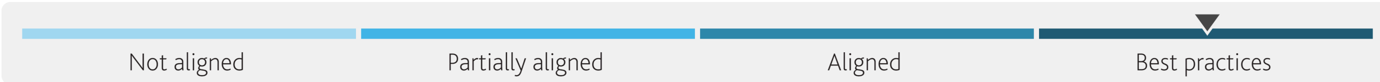
Best practices identified

» Objectives set are defined, relevant and coherent for all project categories

» Relevant benefits are identified for all project categories

» Benefits are measurable and quantified for most projects, either ex-ante with clear baselines or with a commitment to do so in future reporting

Process for project evaluation and selection



Transparency and quality of process for defining eligible projects – BEST PRACTICES

Avain has established a clear process for proposing, selecting, approving allocations for, and monitoring eligible projects, which are formalized in its publicly available framework. Project managers of individual projects (for example, a new building) are responsible for identifying and proposing potentially eligible projects to the Green Finance Committee (GFC). The GFC, comprising the company's CEO, CFO, chair of responsibility group, and treasurer, is responsible for the final selection and approval of the eligible projects and inclusion on the Green Register, as well as the ongoing monitoring of existing projects. The GFC will meet at least annually, and will also ensure that the Green Register of eligible assets is kept up to date. The decisions of the GFC will be documented and filed. The GFC will remove projects from the Green Register asset pool that no longer meet the eligibility criteria or have been subject to a significant controversy.

Environmental and social risk mitigation process – BEST PRACTICES

The environmental and social risk mitigation process has been communicated by the company. The management of such risks includes initial assessments and screenings (that is, preventive measures) as well as corrective measures. Material environmental and social risks are assessed across eligible categories against national regulations and various internal policies, including Avain's Code of Conduct and the Supplier Code of Conduct. Any potential environmental, social and governance (ESG) controversies linked to an eligible project are monitored by the GFC.

Best practices identified

- The roles and responsibilities for project evaluation and selection are clearly defined and include relevant expertise
- There is evidence of continuity in the selection and evaluation process through the life of the financial instrument(s), including compliance verification and procedures to undertake mitigating actions when needed
- The process for project evaluation and selection is traceable
- Material environmental and social risks for most project categories are identified
- Presence of corrective measures to address environmental and social risks across projects
- ESG controversies are monitored

Management of proceeds

Not aligned | Partially aligned | Aligned | Best practices

Allocation and tracking of proceeds – ALIGNED
The proceeds will be placed in the company's general treasury. They will be earmarked for allocation to the Green Register of eligible green projects, to be validated by the GFC in accordance with the green finance framework. The balance of eligible proceeds will be adjusted quarterly, and Avain has committed to ensure that the amount of funds in the Green Register is at least the outstanding amount of the green loans. The company has committed to allocating net proceeds within two calendar years.

Management of unallocated proceeds – BEST PRACTICES
Any temporary unallocated proceeds will be invested in the company's liquidity reserve or in short-term money market instruments. Avain has made a specific commitment to exclude the investment of temporarily unallocated proceeds in the excluded activities, including GHG-intensive activities (fossil fuel energy) or a number of controversial activities (nuclear energy, weapons and defense, gambling, tobacco, and harmful resource extraction).

Best practices identified

» Short allocation period, for example typically less than 24 months

» Disclosure on temporary placement and presence of exclusion criteria toward environmentally or socially harmful activities

» Commitment to reallocate proceeds to projects that are compliant with the framework

Reporting

Not aligned | Partially aligned | Aligned | Best practices

Transparency of reporting – ALIGNED
Avain will report the use of proceeds of bonds issued under its framework annually and this reporting will be made publicly available on its website. Reporting will occur until the maturity of the bonds. The company has stated that reporting will include the amount of green debt outstanding, the balance of eligible assets in the Green Register (including temporary investments and debt repayments), the proportion of net proceeds used to finance or refinance green assets, proceeds allocated at the eligible category level, and the amount of temporarily unallocated proceeds. Reporting will also include the expected sustainable benefits of the projects, measured by environmental impact indicators.

The company has identified relevant environmental reporting indicators for each eligible category and has clearly disclosed these indicators in its framework. Avain's commitment to impact reporting is on a "best-effort basis" and in case of unavailability of certain kinds of data, the company intends to estimate the unavailable data, transparently informing investors and lenders in case estimates are used.

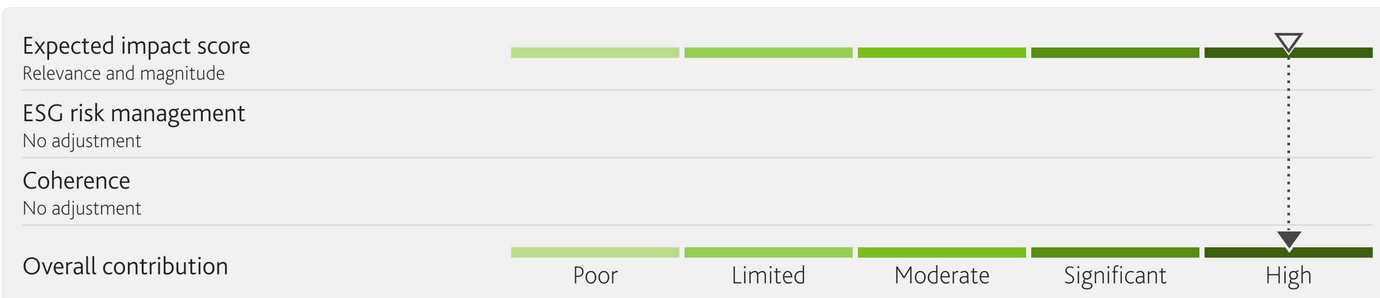
There is no visibility into whether the calculation methodologies and assumptions used for the environmental indicators will be published. The company will not be conducting an independent external audit of the tracking and allocation of funds, nor of the environmental and social benefits and externalities associated with the financed projects.

Best practices identified

- Reporting until full bond maturity or loan payback
- Reporting on allocation of proceeds and benefits done at least at eligible category level
- Exhaustive allocation reporting – balance or % of unallocated funds, types of temporary investments (e.g. cash or cash equivalent) and share of financing vs re-financing
- Clear and relevant indicators to report on the expected environmental/social impact of all the projects, where feasible, or eligible categories

Contribution to sustainability

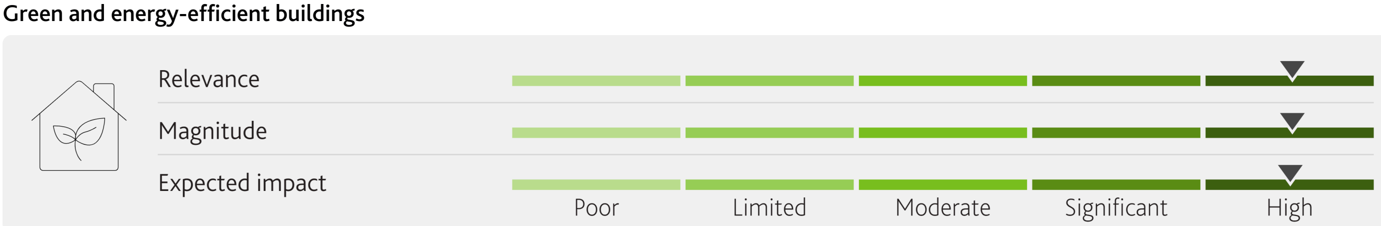
The framework demonstrates a high expected contribution to sustainability.



Expected impact

The expected impact of the eligible projects on environmental objectives is high. The company has communicated that around 90% of the proceeds will be allocated to the first category, "green and energy-efficient buildings," with the remainder going to other categories. We have weighted the four categories accordingly for the purpose of assessing the consolidated contribution to sustainability. Detailed assessment by eligible category is provided below.

Green and energy-efficient buildings



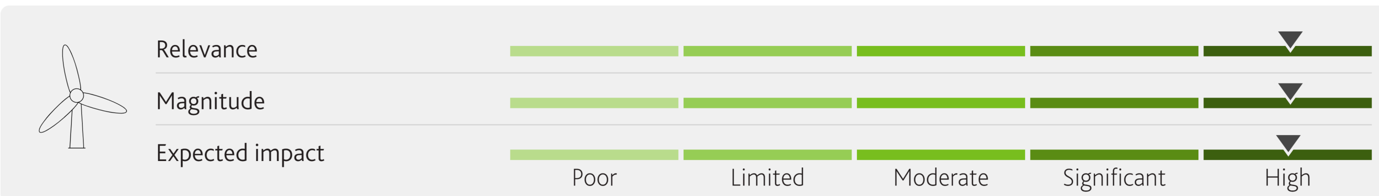
This category includes the construction, acquisition, expansion, and renovation of residential buildings, as well as land acquisition relating to new building construction. Avain plans to allocate between 90% and 100% of the proceeds from the upcoming issuance to this category. New and existing buildings eligible under this category will adhere to the EU Taxonomy's substantial contribution criteria on climate change mitigation, and the company has committed to a threshold of keeping Primary Energy Demand (PED) at least 10% below that required for an NZEB in Finland, which equates to a threshold of 80 kWh/m^2/year for new buildings and 82 kWh/m^2/year for older ones. Furthermore, eligible buildings under this category will have an EU Energy Performance Certificate (EPC) of A or B. Any major renovations will be carried out for buildings that are at least five years old and will be considered eligible if energy demand (in kWh/m^2/year) is reduced by at least 30%. However, the company has communicated that it is focused primarily on new buildings.

The projects are considered to be of high relevance because they respond to the most important sustainability challenge of the real estate sector. Given Finland's carbon neutrality target for 2035, there is a need for green, more energy-efficient buildings in the local context. In Finland, buildings overall account for 40% of final energy end use, and residential buildings alone account for 20%. Furthermore, the

Finnish Climate Change Panel estimates that the carbon footprint of households should decrease by as much as 70% for Finland to achieve its carbon neutrality target by 2035. [1].

We consider the magnitude of this category to be "high" because of the use of stringent thresholds. The aforementioned criteria for new and existing buildings go beyond the local regulatory requirement and the commitment for 30% improvement in major renovation is likely to consistently deliver positive outcomes. Additional efforts are being made to reduce the life-cycle emissions of the buildings. These include the use of sustainable concrete that is produced according to the local regulatory requirements and meet the threshold set forth by the Climate Bonds Initiative (that is, 0,772 tCO_2 for 52,5L). [2]Solar panels are installed on the roof of buildings to help power the geothermal heating, and land is acquired to ensure proximity to public transportation as well as the capacity to access geothermal energy as a heating source for the buildings. While we acknowledge the eligible category's long-term benefits, we also recognize the challenges that remain in decarbonizing the entire life cycle of a building. When looking at the distribution of life cycle emissions by resource type, the highest share of emissions comes from the operational energy use of the building (45% to 80%), followed by embedded emissions in construction stages which includes raw material supply such as delta beams, steel and concrete, the manufacturing of foundation and walls. [3]. This eligible category tackles the operational energy use by applying stringent thresholds and the construction stage emissions by incorporating sustainable concrete. However, it is possible to envision measures that could further reduce both operational and construction stage emissions, for example through the use of sustainable building material choices beyond concrete (e.g. sustainable steel).

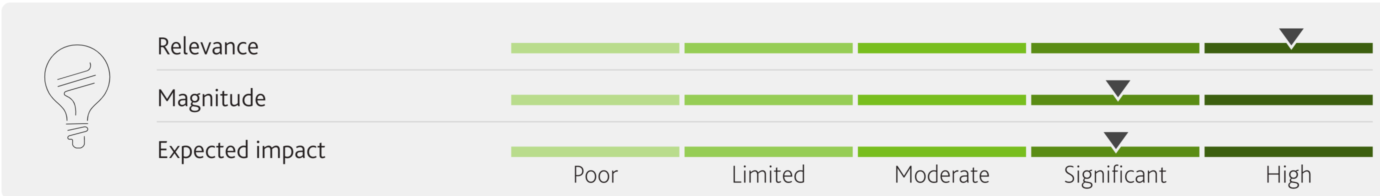
Renewable energy



This category comprises renewable energy projects that use solar (photovoltaic [PV] panels and solar thermal) and geothermal sources, with the issuer specifying that most investments are likely to be in geothermal, in the form of on-site ground-source heat pumps (GSHP). Solar panels will supply energy to the buildings and a portion of the electricity needed for the GSHPs, and solar panels will also be installed at the concrete element manufacturing factory of the issuer's subsidiary (Tenel Oy). We consider this category to be of "high" relevance because of the aforementioned high amount of energy used by buildings in Finland, most of which is for heating (67% of total energy use). This category also complements Finland's decarbonization efforts given Avain's, and the country's, ambitious 2035 carbon neutrality target and the fact that the country's energy mix continues to consist of 40% fossil fuels.

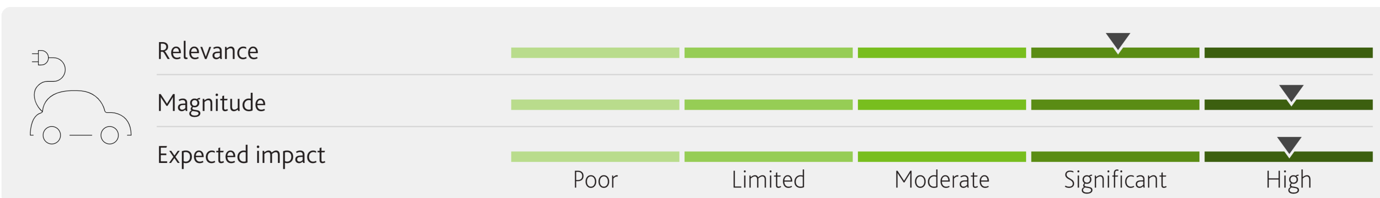
The magnitude is also considered high because we expect the category to produce substantial positive long-term environmental impact with low externalities, and to use the best available technology. In Finland's cold climate, with a demand for heating among the highest in Europe, there are limited options for residential heating, of which GSHPs are the greenest. In Finnish cities, the default heat source continues to be district heating, which has substantial associated GHG emissions because 39% of the heat (as of 2021) is still produced using fossil fuels such as coal, peat, and natural gas; average district heating emissions in Finland was 155g CO_2/kWh in 2020. By comparison, a GSHP has no operational emissions of its own beyond those associated with the electricity it consumes, which, for a GSHP using electricity from the Finnish national grid, equates to around 30g CO_2/kWh. For this particular project, these emissions are likely to be even lower because some of the electricity required for the GSHPs will be supplied from on-site solar panels, and because of Avain's commitment to only install GSHPs with a high Seasonal Coefficient of Performance between 3.5 and 4.5. GSHPs also have low emissions when considered on a life-cycle basis because construction phase emissions are relatively modest; a reliable Scottish estimate under geological circumstances similar to Finland's, for low-enthalpy geothermal heating, found life cycle emissions of 9.7-14 g CO_2/kWh.[4]Although decarbonizing energy production is not the most important climate change mitigation challenge for the real estate sector, we consider the expected impact in this case to be high because the projects are focused on decarbonizing the most material portion of the energy use of the buildings, which is their demand for heating.

Energy efficiency



Under this category, the company plans to finance projects related to the installation of energy management systems, including ones that use artificial intelligence (AI), improved insulation, improved windows, energy-efficient heat exchangers, lighting, ventilation systems, and water efficiency measures. Specific examples provided by the company of the types of projects envisioned include ventilation systems that recover waste heat, and AI-powered optimization systems that control and adjust incoming heat from district heating, and outgoing heat lost via ventilation. Improving the energy efficiency of buildings is highly relevant for the real estate sector, which has a high energy footprint, with buildings accounting for 40% of energy use in Finland. We consider this category to be of "significant" rather than "high" magnitude because of the lack of information on specific technical choices. While the company has committed that any projects under this category would target at least a 30% reduction in energy demand, there is no way for us to determine whether the best available technologies will consistently be used.

Clean transportation



This category includes infrastructure for supporting electric vehicles (EVs), notably the installation of charging points in the parking areas of Avain's buildings. According to global data from the International Energy Agency (IEA), transport emissions have risen faster than any other end-use sector over the last 30 years[5] To get on track with the Net Zero Emissions by 2050 scenario, carbon dioxide (CO) emissions from the sector must fall by about 3% per year to 2030[6] In Finland, where transportation is responsible for 20% of the emission, the government has set an earlier objective to reach a level of 250,000 electric cars in Finland by 2030. Therefore, activities related to decarbonizing the vehicle fleet by incentivizing the uptake zero-emission vehicles play an important role in ensuring a sustainable low-carbon transition. The projects are considered to be of "significant" relevance because decarbonizing transport is not considered the most important sustainability challenge for the real estate sector.

We consider the magnitude of this category to be "high" because of the absence of significant negative lock-in effects, the use of the best available technology, and the positive long-term impact from enabling EV uptake by the residents of Avain's buildings. As of today, there are around 23,000 registered EVs and 77,000 hybrid cars in Finland. Slow speed and medium speed chargers are the two main types used to charge these vehicles, and hybrid cars require a slow speed charger (up to 3.6 kilowatts [kW]) and EVs can support both low and medium speed (up to 22kW). To support the charging of both types of cars, Avain will install low- and medium-speed chargers in the new buildings. Furthermore, efforts are being made to decarbonize their energy supply by using solar panels. Charging stations at homes will accelerate the transition to EVs because they are considered indispensable for the energy transition of the automobile sector. Although the current energy mix of the country makes it difficult to fully reduce the life cycle emission, based on previously stated reasons, we conclude the contribution to sustainability is "high."

ESG risk management

We have not applied a negative adjustment for ESG risk management to the expected impact score. The company has a robust ESG risk management system in place, incorporating preventive and remediation measures. At each construction site, an exhaustive list of environmental and social risk assessments (for example, on waste management, dust management, moisture management, handling of hazardous chemicals, worker safety, and site safety) must be conducted. Avain has a Code of Conduct and requires its suppliers to adhere to the Supplier Code of Conduct, which requires adherence to human rights, worker rights, health and safety standards, and environmental protection laws. All projects, related to the construction of buildings and installation of equipment, involve an assessment to identify potential environmental risks, including those related to waste and water management, pollution, biodiversity impacts, and climate mitigation. Based on this assessment of environmental risks, specific mitigation measures are developed to address risks. Finally, regular inspections, measurements and monitoring will be carried out to evaluate the effectiveness of the measures.

Coherence

We have not applied a negative adjustment for coherence to the expected impact score. Projects financed under the green finance framework are in line with Avain's sustainability strategy detailed in the first part of the framework and in its corporate reporting. Avain's plans to reduce energy usage through construction of green, energy-efficient buildings, the implementation of renewable energy on-site, and additional energy efficiency investments, will contribute to its overarching corporate goal to reach carbon neutrality by 2035. Adding EV charging points to its building parking areas fits in with Avain's corporate commitment to address climate change through its daily operations.

Appendix 1 - Mapping eligible categories to the United Nations' Sustainable Development Goals

The four eligible categories included in Avain's framework are likely to contribute to four of the United Nations' (UN) Sustainable Development Goals (SDGs), namely:

UN SDG 17 Goals	Eligible Category	SDG Targets
GOAL 7: Affordable and Clean Energy	Renewable Energy	7.2: Increase substantially the share of renewable energy in the global energy mix
	Energy Efficiency	7.3: Double the global rate of improvement in energy efficiency
GOAL 9: Industry, Innovation and Infrastructure	Clean Transportation	9.4: Upgrade infrastructure and retrofit industries to make them sustainable, with all countries taking action
GOAL 11: Sustainable Cities and Communities	Green Buildings	11.6: Reduce the adverse per capita environmental impact of cities, with special attention to air quality and waste management
GOAL 13: Climate Action	Green Buildings Renewable Energy Energy Efficiency Clean Transportation	13.2: Integrate climate change measures into national policies, strategies and planning

The UN's SDGs mapped in this SPO consider the eligible project categories (or key performance indicators) and associated sustainability objectives/benefits documented in the issuer's financing framework, as well as resources and guidelines from public institutions, such as the ICMA's SDG Mapping Guidance and the UN SDG targets and indicators.

Appendix 2 - Summary of eligible categories in Avain's framework

Eligible Category	Description	Sustainability Objectives	Impact Reporting Metrics
Green and energy efficient buildings	Projects involving the construction, acquisition, expansion, and renovation of buildings that fulfill the defined criteria. For new buildings, land acquisition costs can also be included. New buildings must have an EU EPC of A or B and energy performance of 80 kWh/m2/yr or less. (82 or less for pre-2021 buildings.) Existing building renovations must achieve at least a 30% reduction in primary energy demand to be considered eligible.	Climate Change Mitigation	Energy performance certificate achieved (Scale of A-E) Energy performance (kWh/m2/year) CO2 emissions intensity (kgCO2e/m3) Water consumption intensity (l/person/day) For renovations: Avoided energy use (kWh/m3) Avoided emissions (kgCO2e/m3)
Renewable energy	Projects related to renewable energy installation and supporting infrastructure, specifically: - Solar (photovoltaic panels, concentrated solar power, solar thermal) - Geothermal (ground-source heat pumps)	Climate Change Mitigation	Share of renewable energy in annual energy consumption (%) Renewable energy generated (kWh/m3) GHG emissions avoided (kgCO2e/m3) Properties with geothermal heating in use (number)
Energy efficiency	Investments to improve energy efficiency in buildings, to include: -Installation of energy management systems, AI systems, improved insulation, heat exchangers, windows, lighting, ventilation systems, water efficiency measures	Climate Change Mitigation	Annual avoided energy (kWh/m3) Annual avoided emissions (kgCO2e/m3) Annual avoided water consumption (l/m3)
Clean transportation	Investment in installation of infrastructure supporting electric vehicles (EVs), such as charging stations	Climate Change Mitigation	Assets with charging stations installed (number) Increase in charging stations installed (%)

Source: Avain's Framework

Moody's related publications

Second Party Opinion analytical framework:

» Framework to Provide Second Party Opinions on Sustainable Debt, October 2022

Topic page:

» ESG Credit and Sustainable Finance

To access any of these reports, click on the entry above. Note that these references are current as of the date of publication of this report and that more recent reports may be available. All research may not be available to all clients.

Endnotes

1 Finland's Climate Report 2021

2 Climate Bonds Initiative Cement Guide.

3 Comparative Study of Life-Cycle Assessment in Finland, January 2022

4 McKay et al. (2019), "Life cycle assessment of the carbon intensity of deep geothermal heat systems: A case study from Scotland," *Science of the Total Environment* **685**:208-219.

5 International Energy Agency, Transport, September 2022.

6 International Energy Agency, Transport, September 2022.

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