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Second Party Opinion

Skanska AB (publ)'s Green Bond Framework

Nov. 7, 2023

Location: Sweden **Sector:** Engineering and Construction

Alignment With Principles

Aligned = ✔ Conceptually aligned = O Not aligned = ✕

✔ Green Bond Principles, ICMA, 2021 (with June 2022 Appendix 1)

See Alignment Assessment for more detail.

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Medium green

Activities that represent significant steps towards a low-carbon climate resilient future but will require further improvements to be long-term low-carbon climate resilient solutions.

Our Shades of Green Analytical Approach >

Strengths

The combination of the framework's eligible categories allows for a holistic approach to reducing carbon emissions across the value chain of buildings. The eligible projects address elements such as low-carbon building materials and the electrification of processes, allowing Skanska to decarbonize across its operations and projects.

Skanska conducts physical climate risk assessments across the regions it operates in, specifically in markets where such assessments are less advanced. All eligible projects under the framework will be subject to a comprehensive risk assessment, in line with the EU Taxonomy's requirements for climate change adaptation.

The issuer has adhered to additional recommendations from ICMA's Green Principles in various parts of the framework. This includes a commitment to report key performance indicators (KPIs) under the "Harmonized Framework for Impact Reporting".

Weaknesses

No weaknesses to report.

Areas to watch

Some project categories do not provide an exhaustive list of activities to be financed. Nevertheless, the issuer cites exemplary projects under the pollution prevention and control and climate change adaptation category and states that future financed projects will be of a similar nature.

For new buildings, framework criteria do not address embodied emissions. This is partially mitigated by the issuer's systematic use of measuring its buildings lifecycle emissions and aligning projects with its Scope 3 reduction target. Skanska's efforts to reduce embodied emissions will depend on the project, and for some projects reducing the operational emissions will be the priority. While these efforts are welcomed, new construction is still associated with high emissions, as knowledge and methodologies tackling this industry challenge are just starting to evolve.

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	**Medium green**
New buildings.	
Existing buildings.	
Renovation of existing buildings.	

Climate Change Adaptation	**Dark green**
Financing of activities that mitigate the adverse effects of climate change and their impact on real estate and other assets. This includes the design and adaptation of buildings and surrounding areas to better withstand climate risks such as increased rainfall, sea level rise, and flooding.	

Energy Efficiency	**Dark to Medium green**
Upgrade of plant equipment and machinery.	
Installation of on-site renewable energy generation.	
Smart building solutions (monitoring, efficiency management and remote operation).	
Energy-efficient lighting, windows and/or ventilation.	
Installation of geothermal heating/cooling.	
Installation of energy storage systems.	

Circular Economy adapted products, production technologies and processes	**Medium green**
Investments to decrease emissions from construction processes, including in low-carbon building materials and digital enablers.	

Pollution prevention and control	**Dark green**
Investments in nature-based solutions, such as biochar, to capture and store carbon and/or provide other environmental benefits.	

Clean transportation	**Dark green**
Investments in electric vehicles and machinery.	

Investments in enabling infrastructure, such as charging stations, and installation of AI and automation systems.

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

Skanska AB (publ) is a public construction and project development company headquartered in Stockholm, Sweden, with presence in the Nordics, Europe, and the U.S. It operates through four segments: construction, residential development, commercial property development, and investment properties. The construction segment builds public facilities, transport infrastructures, commercial offices, and homes. The residential development segment develops and sells residential projects, including single and multi-family housing. The commercial property development segment initiates, develops, leases, and divests in commercial properties. The investment properties segment owns and manages investment properties. Skanska also produces asphalt, gravel, road construction materials, and concrete.

Material Sustainability Factors

Climate transition risk

Engineering and construction companies contribute to global climate change largely through embedded carbon in key materials such as steel and concrete and the greenhouse gas emitted during the project use phase, which varies widely. Clients are more focused on lowering their greenhouse gas emissions, making climate transition risk an important stakeholder consideration. Furthermore, entities could be exposed to reputational risks if they participate in the most carbon-intensive projects.

Physical climate risk

The geographically fixed nature of real estate assets exposes them to physical climate risks, which translate to potential damages to assets, and disruptions to stakeholders and operations. While the severity of physical risks varies by region, chronic risks such as changes in temperature and precipitation patterns, or acute risks such as floodings and heat waves, need to be addressed during the designing and building phases. Severe weather events can also pose risks during the construction phase.

Biodiversity and resource use

The construction industry faces significant resource-use issues. Key challenges include energy consumption, extensive material usage, and water depletion. Resource-intensive materials and practices pose risks to finite resources. Additionally, water scarcity concerns arise from construction-related water usage. Addressing these problems through resource-efficient designs, alternative materials and the responsible management of resources is essential to reduce the industry's impact on both local habitats and global footprints.

Workforce health and safety

Construction sites can expose workers to heightened safety risks from use of heavy machinery, falls, hazardous chemicals, and other potentially dangerous situations, translating into higher fatality and injury rates than in other sectors. In 2021, more than one-fifth (22.5 %) of all fatal work accidents in the EU took place within the construction sector, according to Eurostat. The reliance on temporary employees and subcontractors also poses risks, because safety protocols can be lax compared with larger companies that typically have more satisfactory training, policies, and standards, particularly in developed markets.

Employment practices

Attracting, retaining, and developing a highly skilled workforce is increasingly important for the construction industry, especially as the broader sector's digital capabilities advance. For employees, fair wages with appropriate benefits and career opportunities are becoming increasingly material given competition from other sectors and the heavy reliance on temporary employees and subcontractors.

Issuer And Context Analysis

The framework's eligible projects address both climate transition and physical risks, which we consider to be the most material sustainability factors for Skanska. Additionally, potential concerns around the reduction of resource-intensive raw materials are addressed by considerations on materials reuse and recycling. Finally, although the green bond framework is not designed to address social matters, we note that the considerations around workforce health and safety and employment practices are relevant for all project categories. All Skanska's business units hold ISO 45001 certification for continuous improvement. Although public health and safety performance targets are not disclosed, the issuer exceeded its target on executive site safety visits in 2022. Comprehensive disclosure of lost time accident rates (LTAR), total accidents, and fatalities, ensures transparency and accountability.

The financed projects are supportive and well-harmonized with the issuer's overall environmental, social, and governance strategy. Skanska's climate strategy is outlined in the company's "ACT on Climate" plan, emphasizing the group's commitment to raise awareness about sustainable construction, deliver low-carbon solutions to customers, and enhance the sustainability of its operations. In 2019, the issuer established its group climate target to reach net-zero emissions by 2045 both in operations (scope 1 and 2) and across the value chain (scope 3). The climate interim targets unveiled in 2021 have received Science Based Targets initiative (SBTi) approval, which we see as best practice, for their alignment with the 1.5 C pathway. These targets encompass achieving a 70% reduction in absolute scope 1 and 2 greenhouse gas emissions by 2030, based on 2015 levels, as well as achieving a 50% reduction in absolute scope 3 emissions by 2030, based on 2020 levels.

Skanska annually publishes its sustainability report covering the most material environmental and social metrics, including direct operational carbon emissions and those throughout the value chain. Based on the public and externally verified data, we observe the issuer's performance as being in line with meeting its carbon reduction targets. Furthermore, following Task Force on Climate-related Financial Disclosures (TCFD) recommendations, the group performs climate-based scenario analysis to identify and manage business risks and opportunities tied to climate change's transition and physical impacts.

While we consider the issuer's public disclosure on biodiversity to be at a nascent stage, the company is deemed advanced with respect to reporting on resource use. Indeed, the issuer plays particular attention to the latter, given that material usage is closely linked to carbon emissions. The group's approach includes setting specific waste reduction targets to eliminate landfill use, embracing alternative raw materials such as low carbon concrete from fly ash, and slag, and enhancing recycling rates, as demonstrated by the increased use of recycled asphalt. With respect to biodiversity, we note that this is of secondary importance to the issuer's operations and activities financed under the framework, specifically because only projects built on brownfield sites are eligible to receive funding.

Alignment Assessment

This section provides an analysis of the framework's alignment to ICMA's Green Bond Principles.

Alignment With Principles

Aligned = ✔ Conceptually aligned = O Not aligned = ✘

✔ Green Bond Principles, ICMA, 2021 (with June 2022 Appendix 1)

✔ Use of proceeds

All the framework's green project categories are shaded in green, and the issuer commits to allocate the net proceeds of future bonds issued under the framework exclusively to eligible green projects. Please refer to the Analysis of Eligible Projects section for more information on our analysis of the environmental benefits of the expected use of proceeds. The issuer will allocate the proceeds to finance new developments and existing projects under its green framework, and further specifies that all investments financed under the framework are capital expenditure (capex), hence no lookback period is communicated. Moreover, the issuer expects to allocate proceeds within a timeframe of no longer than 12 months, which we consider good practice. The project categories include climate change adaptation, energy efficiency, green buildings, pollution prevention and control, and clean transportation, as well as circular economy adapted products, production technologies, and processes.

✔ Process for project evaluation and selection

Skanska has a dedicated Green Bond Committee (GBC) responsible for deciding upon the allocation of proceeds, based on compliance with the green terms and environmental impacts. This includes life-cycle considerations, potential rebound effects, and considerations around resilience of projects, among other things. The GBC includes members from Skanska financial services, sustainability and innovation, and other relevant business units. Within the process, the issuer identifies the environmental objectives of each of the projects such as climate mitigation, climate change adaptation, and transition to a circular economy. The specified selection criteria partially draw on external certificates and thresholds from the EU Taxonomy, which we consider good practice. The GBC is further responsible for identifying and mitigating social and environmental risks associated with the financing of eligible projects. To support this, Skanska has outlined an exclusion list, ensuring that no activities related to fossil fuels and nuclear energy generation, among others, can be financed under the framework.

✔ Management of proceeds

The issuer commits to credit an amount equal to the net proceeds of any green financing to an earmarked account ("green account"), or using a tracking method, to document and monitor the allocation of proceeds to the eligible green projects. It also states that proceeds will be periodically adjusted to match allocations to eligible projects during the time the instrument is outstanding. Unallocated proceeds will be allocated in line with Skanska's short-term excess liquidity, and in compliance with the exclusion list presented in the framework, as well as the issuer's finance policy requirements.

✔ Reporting

The issuer commits to reporting annually on both the allocation of proceeds and impact until full allocation of the green financing instruments. Reporting will include information of the eligible projects and assets financed, the sum of outstanding green financing and the sum of green portfolio balance (including short-term investments), the proportional allocation of net proceeds to existing projects, and new projects, among others.

The framework specifies that the company will seek to receive assurance by an external auditor on its annual allocation report, though not on its impact report. In addition, the issuer will align its impact reporting, on a best effort basis, with ICMA's Harmonised Framework for Impact Reporting (June 2023), which we view as a strong feature.

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 year following the issuance of the financing, Skanska expects to allocate the substantial majority of proceeds issued under the framework to new green building category and the remainder to other project categories.

The issuer states that all investments under the framework will be in the form of capex.

Overall Shades of Green assessment

Based on the Shade of Green project categories detailed below, and consideration of environmental ambitions reflected in the Green Bond Framework, we assess the framework as medium green, reflecting our understanding that most proceeds will go toward the financing of new buildings.

Medium green

Activities that represent significant steps towards a low-carbon climate resilient future but will require further improvements to be long-term low-carbon climate resilient solutions.

Our Shades of Green Analytical Approach >

Green project categories

Green Buildings

Assessment	Description
Medium green	Investments in environmentally accredited and energy-efficient buildings, as defined below (all three criteria must be met): New buildings (built after Dec. 31, 2020) **Europe** • Primary energy demand is, or will be, at least 20% lower than the threshold set for nearly zero-energy building (NZEB) requirements in national measures. For buildings larger than 5,000 square meters: – Upon completion, the building undergoes testing for airtightness and thermal integrity; and – The life-cycle global warming potential (GWP) of the building has been calculated. • Buildings have, or will receive, one of the following certifications: – Leadership in Energy and Environmental Design (LEED; minimum certification Gold); – Building Research Establishment Environmental Assessment Method (BREEAM) International (minimum certification Excellent); – German Sustainable Building Council (DGNB; minimum certification Gold); or – Equivalent national certification standards. • All new buildings have or will receive a screening for material climate risks. **U.S.** • Primary energy demand is, or will be, at least 20% lower than the applicable national building regulation.

- Buildings have, or will receive, one of the following certifications:
  - LEED (minimum certification Gold);
  - BREEAM International (minimum certification Excellent);
  - DGNB (minimum certification Gold); or
  - Equivalent national certification standards.
- All new buildings have or will receive a screening for material climate risks

Existing buildings (built before Dec. 31, 2020)

- Existing buildings have an Energy Performance Certificate (EPC) demonstrating Class A or are within the top 15% of the national or regional building stock, expressed as Primary Energy Demand (PED).
- Buildings have, or will receive, one of the following certifications:
  - LEED (minimum certification Gold);
  - BREEAM International (minimum certification Excellent);
  - DGNB (minimum certification Gold); or
  - Equivalent national certification standards.
- Existing buildings have undergone a screening of material climate risk.

Renovation of existing buildings

- Renovation of existing buildings that either leads to a reduction of PED of at least 30%, or where the building meets the applicable requirements for "major renovations."
- Buildings have, or will receive, one of the following certifications:
  - LEED (minimum certification Gold);
  - BREEAM International (minimum certification Excellent);
  - DGNB (minimum certification Gold); or
  - Equivalent national certification standards.
- Renovated buildings have undergone a screening of material climate risk.

Analytical considerations

- In new construction, improving energy performance and reducing emissions associated with building materials are, in our view, key topics to address from a low-carbon perspective. For existing buildings, high energy performance is important to the transition to a low carbon economy. For all buildings, mitigating the exposure to physical climate risks is crucial to improving climate resilience. The issuer has confirmed that the majority of buildings financed under the framework will be new developments in the Nordics. However, eligible buildings may also be financed in other regions in which Skanska is operating (i.e., the U.S. and Central Europe).
- For new buildings financed in Europe, the issuer goes beyond the thresholds laid out in the EU Taxonomy, requiring their energy demand to be more than 20% below the threshold for NZEB. For new buildings financed in the U.S., the issuer informs us that the selected baseline will draw on the most recent version of the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) standard, whose thresholds are also utilized by the LEED certification. Future developments will rely on the national standard for zero-emission buildings, which is currently being developed at the federal level.
- The criteria for existing buildings should ensure that some of the most efficient buildings are financed. For the top 15% threshold specifically, this often only includes buildings in line with regulations applicable at the time of construction. The issuer notes that its portfolio consists of only one property built before Dec. 31, 2020, and thus falls within the scope of these criteria. Nevertheless, Skanska confirms that this property performs far above the 15% threshold set by the EU Taxonomy, 39% lower

than NZEB in terms of primary energy demand. The issuer relies on an external benchmark to determine the top 15% and states that the threshold will be updated continuously.

- In the transition toward a low-carbon society, the renovation of existing properties is crucial. Accordingly, refurbishments with a 30% reduction in energy consumption, supported by an environmental certificate and physical risk screening as addressed below, will be vital to meeting the sector's decarbonization targets.
- Green building certification standards cover a broad set of issues that are important for sustainable development. However, at the time, they differ considerably in their requirements for energy efficiency, embodied emissions of construction materials, related transportation emissions and considerations of resilience. The issuer confirms that financed buildings will receive one of the mentioned certificates in addition to the energy performance thresholds described above.
- The issuer excludes buildings from its framework that have on-site fossil fuel heating. While energy used in the generation of district heating for buildings may be fossil-based, the issuer does not have control over this. Furthermore, according to the EIA, the share of renewable energy in district heating networks is among the highest in the world in the Nordics, where the majority of eligible projects will be financed.
- The framework lacks specific thresholds to address embodied emissions, which depending on the regional context may contribute to half of a building's life-cycle emissions. Nonetheless, we acknowledge that the issuer has put in place an overarching objective to reduce scope 3 emissions by 50% by 2030. To achieve this target, Skanska states it will use different tools and methods, including project-level LCA analyses and structured follow-up through the use of carbon reduction curves to determine whether projects contribute to this target. In addition, the issuer has put in place various initiatives to help achieve this target, notably investments in low-carbon building materials, the electrification of construction processes, and the implementation of measurement tools to address embodied emissions. Skanska confirms that buildings financed under the framework will be among its best-performing projects, including in terms of embodied emissions.
- The issuer includes as a requirement that all financed buildings will receive a screening for material climate risks, including heat, cold, fire, flood, precipitation, and wind, under different climate scenarios. This assessment will also be in line with the EU Taxonomy's Technical Screening Criteria for climate change adaptation, which we find to be a robust approach.

Climate change adaptation

Assessment	Description
Dark green	Financing of activities that mitigate the adverse effects of climate change and their impact on real estate and other assets. This includes the design and adaptation of buildings and surrounding areas to better withstand climate risks such as increased rainfall, sea level rise, and flooding.

Analytical considerations

- Climate scientists have been clear that some level of climate change is taking place even in the most optimistic scenarios. It is therefore crucial to plan and mitigate potential risks to reduce the potential financial and environmental impact of such events. Implementing adaptation solutions can also reduce resources and emissions linked to rebuilding damaged assets.
- Depending on the physical risks present on the specific site, the company states that adaptation projects will be selected on a case-by-case basis. Recent examples include buildings with floating foundations or a shoreline that is designed to absorb flooding. The company confirms that all developed projects, including any adaptation measures, are required to calculate life-cycle emissions, which reduces potentially negative side effects from such projects to climate change mitigation.
- Construction projects to support adaptation can also have local environmental and biodiversity impacts that must be managed. Skanska states that an environmental impact assessment (EIA) is conducted for all projects as required by local regulation.

Energy efficiency

Assessment	Description

Dark to Medium green	Investments that target lower energy use and an improved environmental footprint. 1) Upgrade of plant equipment and machinery 2) Installation of on-site renewable energy generation 3) Smart building solutions (monitoring, efficiency management, and remote operation) 4) Energy-efficient lighting, windows and/or ventilation 5) Installation of geothermal heating/cooling 6) Installation of energy storage systems

Analytical considerations

- From a 2050 perspective, lowering building energy use through efficiency investments is a key element to a low-carbon future. The replacement and installation of energy-efficient windows, light sources, and control systems, and installing more efficient heating, cooling, and ventilation equipment and related management systems is beneficial from an environmental perspective because it can reduce the overall energy consumption and carbon footprint of the real estate sector.
- Upgrading equipment and machinery to improve energy performance constitutes an important part of the transition to low-emission operations.
- A low-carbon transition also depends on renewable energy sources such as solar power generation. For renewable energy, Skanska aims to focus on the financing of on-site solar panels for buildings. Here, we see potential environmental impacts as well as transportation and embodied emissions in the solar panel supply chains. Downstream, end-of-life solar infrastructure can be linked to potential waste and local pollution risks.
- Renewable sources of heating and cooling, including geothermal, are crucial in the low carbon transition. However, heat pumps in geothermal heating systems may rely on fossil fuel-based electricity coming from the grid. Geothermal systems also commonly rely on hydrofluorocarbon (HFC) refrigerants, which are potent greenhouse gases, or antifreeze solution, which can be toxic. Leakage may contribute to climate warming and groundwater pollution.
- Energy storage solutions can help mitigate the volatility of renewable energy systems such as solar, including against climate risks, such as extreme changes in weather. However, battery storage requires high volumes of environmentally sensitive materials. The supply chains for these materials need to be appropriately managed, to avoid creating new adverse social and environmental impacts.
- Energy efficiency improvements should be supported by stringent quantitative performance measurements. The moderately ambitious goal of a minimum of 20% energy efficiency on all projects caps the total shade at dark-medium green.

Circular Economy adapted products, production technologies and processes

Assessment	Description
Medium green	Investments to decrease emissions from construction processes through the reuse and recycling of materials, and to produce low-carbon building materials such as concrete and asphalts. This also includes investments in digital enablers.

Analytical considerations

- The issuer confirms that eligible investments under this category will include capex such as the development and scaling of own plants to produce low-carbon asphalt. Examples include its Vällsta plant outside Stockholm, which produces asphalt using recycled materials and reduces carbon dioxide emissions by up to 50% (per ton of asphalt). Skanska will also finance expenditure related to the development of different types of low-carbon concrete, providing carbon emission savings through replacing a portion of cement with alternative binders such as slag or fly ash. The low-carbon building materials financed under the framework can be used across Skanska's operations aside from building development, including road construction, for example. In addition, eligible expenditure under this category includes investments into digital enablers, similar to the EC3 tool

developed by Skanska in collaboration with Microsoft and other partners. This aims to help the construction industry estimate and reduce the embodied carbon emissions in buildings.

- Low-carbon building materials, including concrete and asphalt, will play a crucial role in reducing the emissions associated with the built environment. These can reduce emissions by using less energy and resources, recycling more waste materials, and improving the performance and durability of buildings and infrastructure. The built environment is responsible for over 40% of the primary energy consumption and 36% of the carbon footprint in Europe. Reducing the emissions from buildings and construction is critical to achieving net-zero emissions by 2050 and limiting global warming to 1.5 C.
- While the use of slag and fly ash offer short-term emissions reductions, these are predominantly sourced as byproducts from iron and steel, highly fossil-fuel dependent and emissions-intensive production processes, as well as coal-based energy generation, which results in substantial transition risk associated with these activities. There are also potential risks around the valorization of these emission-intensive processes.
- Life-cycle emissions, such as from the transport of slag or fly ash to Skanska's plants, can contribute a significant source of value chain emissions, specifically given their limited availability in some regions. However, the issuer notes that such emissions are considered in the procurement process. More generally, Skanska also obtains environmental product declarations (EPDs) to indicate the carbon footprint of its products and verify carbon reductions.
- All financed plants will be subject to a climate risk assessment as well as environmental impact assessment in line with legislative requirements, as mentioned above.
- The issuer's efforts to reduce embodied emissions through digital enablers and the own production of low-carbon concrete and asphalt constitute a relevant step to the transition of the sector. While some of these activities are still associated with certain risks outlined above, and there is not an exhaustive list of eligible activities provided, this category is considered medium green.

Pollution prevention and control

Assessment	Description
Dark green	Investments in nature-based solutions such as biochar to capture and store carbon and/or provide other environmental benefits.

Analytical considerations

- The removal of greenhouse gases from the atmosphere plays a pivotal role in Intergovernmental Panel on Climate Change (IPCC) scenarios that limit warming to 1.5 C or 2 C, and technological breakthroughs are needed for achieving removal at this scale. Therefore, carbon capture, utilization, and storage (CCUS) are critical to a sustainable low-carbon future. Furthermore, projects aimed at reducing pollution are also an important component of an environmentally sustainable future.
- Biochar is a nature-based solution produced through the pyrolysis of biomass in specialized boilers. It acts as a carbon sink mean in soil or construction materials, along with providing additional environmental advantages, such as mitigating soil contamination and enhancing water and nutrient retention.
- Skanska's biochar is certified C-sink by a third-party authority, which assesses several steps of its value chain, including pyrolysis efficiency and raw materials usage. The biomass adopted is wood waste coming from construction sites. The side-products of the pyrolysis, the main ones being heat and oil, which are reused by the issuer in the drying process (for heat) and as alternative low-carbon raw material in asphalt (for oil).
- As previously noted, Skanska will perform a climate risk assessment, focusing on the key physical climate hazards (such as heat, cold, fire, flood, precipitation, and wind) across its project sites. While the production boilers may regularly change location, the issuer confirms that these are generally placed in near proximity of its projects, and thus subject to the same climate risk assessments. Furthermore, since biochar will be applied either in urban landscaping or in the concrete structure of buildings, it will likely face minimal exposure to external events (such as wildfires) which could affect its carbon sinking potential.
- While not providing an exhaustive list of activities under this category, the issuer confirms that future projects around nature-based solutions will be of similar nature to the expenditure related to biochar, as described above.

Clean transportation

Assessment	Description
Dark green	Investments in electrification, automation, AI, and other digital solutions. For example, investments in EVs and machinery and associated enabling infrastructure as well-as installation of AI and automation systems.

Analytical considerations

- EVs are important in decarbonizing the transportation sector. The dark green assessment reflects that EVs will be part of a low-carbon future.
- The company will finance the acquisition of EVs and electric "yellow machineries" (used on construction sites), the construction of charging stations, their installation, and the adoption of logistics' AI and automation systems, which will reduce the emission intensity of Skanska's processes. Yet, there are indirect issues of carbon emissions from a life-cycle perspective (materials sourcing, manufacturing).
- While the financing of an electric fleet is increasingly common in the market, the electrification of heavy construction equipment and machinery is rarer, because of constraints linked to their energy demand, size, and weight. Furthermore, digital and automation solutions may further optimize such machineries to become more efficient and reduce overall energy consumption and carbon dioxide emissions.
- There are considerable risks in the value chain of EVs, related to the sourcing of batteries and their materials as well as life-cycle emissions.
- Across all activities financed under the framework, Skanska will perform a climate risk assessment, focusing on the key physical climate hazards (such as heat, cold, fire, flood, precipitation, and wind). Therefore, also the electrification infrastructure and the charging stations will be subject to this process.

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 International Capital Markets Association (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	 **11. Sustainable cities and communities***  **12. Responsible consumption and production**  **13. Climate action**
Energy efficiency	 **13. Climate action**  **7. Affordable and clean energy***
Clean transportation	 **11. Sustainable cities and communities***  **13. Climate action**  **9. Industry, innovation and infrastructure**
Circular economy adapted products, production technologies and processes	 **12. Responsible consumption and production***  **13. Climate action**

Pollution prevention and control	 **12. Responsible consumption and production***	 **13. Climate action**
Climate change adaptation	 **11. Sustainable cities and communities**	 **13. Climate action***

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

Related Research

- Analytical Approach: Second Party Opinions: Use of Proceeds, July 27, 2023
- FAQ: Applying Our Integrated Analytical Approach for Use-of-Proceeds Second Party Opinions, July 27, 2023
- Analytical Approach: Shades of Green Assessments, July 27, 2023
- S&P Global Ratings ESG Materiality Maps, July 20, 2022

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