

'Second Opinion' on Skanska's Green Bond Framework

March 21, 2018

Summary

Skanska is one of the world's leading construction and project development companies, focused on selected home markets in the Nordics, other European countries and North America. Skanska issued its first green bond in 2014 and has in March 2018 updated its green bond framework. CICERO provided a Second Opinion (originally dated 27.03.2014, amended 24.10.2014) on the company's original green bond framework; this Second Opinion is an update that incorporates changes to the framework. In 2017, Skanska Group set a new green strategy, which will better position Skanska to succeed in its mission of delivering Profit with Purpose beyond the current 2020 business plan. This strategy focuses on resilient, zero and low-carbon solutions, which support the ambitions of many customers, peers, suppliers and society. In addition, key to the strategy is significantly reducing the Group's carbon footprint by 2030, in line with the Paris international climate agreement.

To be able to drive the development and reach these strategic ambitions, Skanska-developed commercial and residential projects plays an important role. Green Bonds will enable Skanska to finance a large part of these projects with funds from green and sustainable investors.

Skanska's Green Bond framework and environmental policies provide a clear and sound framework for climate-friendly investments in alignment with the 2017 Green Bond Principles. The Green Bond framework lists eligible green properties that are supportive of the objective of promoting a transition to a low-carbon and climate-resilient growth. Eligible projects under Skanska's Green Bond framework are commercial and residential properties already certified or under construction to be certified under one of a number of well-known certification schemes (dependent on locality). The minimum requirements for certified green buildings do not, however, ensure substantial improvements of energy efficiency compared with existing local building regulations. On the other hand, the company strategy called Journey to Green, clearly call for continued energy efficiency gains across the total portfolio with the ultimate aim of reaching a near zero emission target. Today, some projects may, however, be heated by district heating, where one cannot entirely guarantee the absence of fossil fuels. Procedures for monitoring and measurement of activities under the Green Bond framework are well documented. Skanska's policies support regular and transparent updates to investors and the public. We are encouraged to see that this also includes measurements of environmental impacts.

Based on an overall assessment of the project types that will be financed by the green bond, and governance and transparency considerations, Skanska's Green Bond framework gets **a medium green shading**.



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1 Introduction and background

As an independent, not-for-profit, research institute, CICERO Center for International Climate Research provides Second Opinions on institutions' framework and guidance for assessing and selecting eligible projects for green bond investments and assesses the framework's robustness in meeting the institutions' environmental objectives. The Second Opinion is based on documentation of rules and frameworks provided by the institutions themselves (the client) and information gathered during meetings, teleconferences and e-mail correspondence with the client.

CICERO is independent of the entity issuing the bond, its directors, senior management and advisers, and is remunerated in a way that prevents any conflicts of interests arising as a result of the fee structure. CICERO has established the global Expert Network on Second Opinions (ENSO), a network of independent non-profit research institutions on climate change and other environmental issues, to broaden the technical expertise and regional experience for Second Opinions. CICERO works confidentially with other members in the network to enhance the links to climate and environmental science, building upon the CICERO model for Second Opinions. In addition to CICERO, ENSO members currently include Basque Center for Climate Change (BC3), International Institute for Sustainable Development (IISD), Stockholm Environment Institute (SEI), and Tsinghua University's Institute of Energy, Environment and Economy. A more detailed description of CICERO can be found at the end of this report. ENSO encourages the client to make this Second Opinion publically available. If any part of the Second Opinion is quoted, the full report must be made available.

CICERO's Second Opinions are normally restricted to an evaluation of the mechanisms or framework for selecting eligible projects at a general level. CICERO does not validate or certify the climate effects of single projects, and thus, has no conflict of interest in regard to single projects. CICERO is neither responsible for how the framework or mechanisms are implemented and followed up by the institutions, nor the outcome of investments in eligible projects.

This note provides a Second Opinion of Skanska's Green Bonds Framework and policies for considering the environmental impacts of their projects. The aim is to assess the Skanska's Green Bonds Framework as to its ability to support Skanska's stated objective of promoting the transition to low-carbon and climate resilient growth.

This Second Opinion is based on the green bond framework presented to CICERO by the issuer in March 2018. Any amendments or updates to the framework require that CICERO undertake a new assessment.

CICERO takes a long-term view on activities that support a low-carbon climate resilient society. In some cases, activities or technologies that reduce near-term emissions result in net emissions or prolonged use of high-emitting infrastructure in the long-run. CICERO strives to avoid locking-in of emissions through careful infrastructure investments and moving towards low- or zero-emitting infrastructure in the long run. Proceeds from green bonds may be used for financing, including refinancing, new or existing green projects as defined under the mechanisms or framework. CICERO assesses in this Second Opinion the likeliness that the issuer's categories of projects will meet expectations for a low carbon and climate resilient future.

Expressing concerns with 'shades of green'

CICERO/ENSO Second Opinions are graded dark green, medium green or light green, reflecting the climate and environmental ambitions of the bonds and the robustness of the governance structure of the Green Bond Framework. The grading is based on a broad qualitative assessment of each project type, according to what extent it contributes to building a low-carbon and climate resilient society. The shading methodology also aims at providing transparency to investors when comparing green bond frameworks exposure to climate risks. A darker green project is less exposed to climate risks than a lighter green investment.

This Second Opinion will allocate a 'shade of green' to the green bond framework of Skanska:

- **Dark green** for projects and solutions that are realizations today of the long-term vision of a low carbon and climate resilient future. Typically, this will entail zero emission solutions and governance structures that integrate environmental concerns into all activities.
- Medium green for projects and solutions that represent steps towards the long-term vision but are not quite there yet.
- **Light green** for projects and solutions that are environmentally friendly but do not by themselves represent or is part of the long-term vision (e.g. energy efficiency in fossil-based processes).
- **Brown** for projects that are irrelevant or in opposition to the long-term vision of a low carbon and climate resilient future.

The grading is based on a broad qualitative assessment of each project type, according to what extent it contributes to building a low-carbon and climate resilient society. However, governance and transparency considerations are also important because they give an indication whether the institution that issues the green bond will be able to fulfil the climate and environmental ambitions of the investment framework. The overall shading reflects an ambition of having the majority of the project types well represented in the future portfolio, unless otherwise expressed by the issuer. Note that investments in all shades of green projects are necessary in order to successfully implement the ambition of the Paris agreement.

Buildings sector considerations

With buildings accounting for nearly 40 percent of global energy consumption, the building sector should play a key role in effective climate policy. Energy efficiency improvements in buildings are thus important building blocks towards reaching the 2° C goal.

Several voluntary environmental certification systems provide some level of measurement of the environmental footprint of a building, including energy efficiency credits, with BREEAM and Leadership in Energy and Environmental Design (LEED) possibly the most widely used certification system. A LEED rating is determined by the number points (credits) earned in the project check-list. A higher number of points earns a higher rating, with some requirements for each rating level. Although the LEED certification system does not have a site selection prerequisite, the sustainability of building site selection, including the urban density and access to public transportation, accounts for 10% of the total points possible. BREEAM, DGNB and Svanen are similar environmentally comprehensive certification systems, where energy efficiency is only one out of several concerns earning points in a scorecard. This open for some trade-offs between energy efficiency targets and other environmental concerns. The overall certification level is determined by the total score.

2 Brief Description of Skanska's Green Bond Framework and rules and procedures for climate-related activities

Skanska is one of the world's leading project development and construction groups, concentrated on selected home markets in the Nordic countries, other European countries and in North America. In 2017 the Group had 40 760 employees. Skanska was the first company in the industry to implement the ISO 14000 standards globally, with all its business units having been certified according to ISO 14001 since 2000. The Financial Times described Skanska in 2014 as aiming to be the "greenest contractor in the world" (Andy Sharman, Mar 23, 2014). Skanska's sustainability agenda consists of five focus areas: Safety, Ethics, Green, Community Investment, and Diversity & Inclusion. The focus areas are the sustainability areas through which Skanska can make the most significant positive contributions to society. The focus areas are integrated into Skanska's 2020 Profit with Purpose Business Plan and the company aspires to be an industry leader within each of the focus areas, and with sustainability as a whole.

Skanska has developed a strategic framework – 'The Skanska Color PaletteTM' – to measure and communicate the company's performance towards its 'Deep Green' target, whereby processes and products should have a near zero impact on the environment. Building and civil and infrastructure projects are categorized as vanilla, green or deep green, depending on their performance with respect to meeting Skanska's energy, carbon, material and water targets.

Skanska recognizes the United Nations' 17 Sustainable Development Goals (SDGs), which demonstrate the scale and ambition of the worldwide 2030 Agenda for Sustainable Development. Through what is built and how it is built, Skanska contributes to the society and strives to minimize the negative impact and increase the positive impact of the business and projects. This aligns well with the purpose of the United Nations Sustainable Development Goals and Skanska can in many ways contribute to achieving the United Nations Sustainable Development Goals. By using the SDGs as a framework for measuring the impact, it is possible to show how Skanska builds for a better society and steers the sustainable focus towards what adds the most to society now and in the future.

Definition

The proceeds of Skanska's Green Bonds are used to finance the Group's development of commercial and residential projects certified in accordance with well-known building certification schemes depending on localities. There are no additional energy efficiency requirements, and some projects are heated by district heating, where one cannot entirely guarantee the absence of fossil fuel.

Selection

Eligible Assets are selected by Skanska Financial Services together with the relevant developer. The portfolio of Eligible Projects will be reviewed and updated on a semi-annual basis, or if needed when a new bond is being issued. There a documented process (ISO 14.001) to identify and manage potential ESG risks associated with the projects.

For commercial properties with LEED, BREEAM or commercial and residential properties with DGNB certification, the selection is carried out by Skanska Financial Services in cooperation with business units:

- CDN (Commercial Development Nordics)
- CDE (Commercial Development Europe)
- CDUS (Commercial Development USA)

depending on the location of the property/project. All of these business units have environmental staff.

For the Nordic Label Svanen, Skanska Financial Services will select the Eligible Projects together with the staff from Skanska Nya Hem and the Sustainability Department in Skanska Sweden.

The Green Bond Committee consists of representatives from Skanska group senior management, Skanska AB Green & Community Investment department, the development units and Skanska Financial Services. The committee will on a semi-annual basis, or when required due to changes in the project-portfolio, review the selected Eligible Projects to safeguard that the selected projects are compliant with the eligibility criteria under this framework. If the projects are compliant, the Green Bond Committee, chaired by the SVP Skanska AB Green & Community Investment will give their approval. Should some projects not be compliant, the Green Bond Committee will ensure that such projects are promptly removed from the list of Eligible Projects. In order to ensure proper environmental governance in the decision-making process, the SVP Green & Community Investment has a veto.

Management of proceeds

An amount equal to the net proceeds of the issue of the Notes will be credited to accounts that will support Skanska's lending for Eligible Projects. So long as the Notes are outstanding and the accounts for Eligible projects have a positive balance, unallocated proceeds will be held in Skanska's liquidity reserves until disbursement and managed as such. CICERO finds the management of proceeds to be in alignment with the Green Bond Principle.

Transparency and Accountability

To enable investors to follow the development and to provide insight to prioritized areas Skanska will provide on a semi-annual basis (1) a list of projects financed and (2) a selection of project examples. On an annual basis, Skanska will provide a summary of Skanska's development on Green construction. The investor reporting will be available on Skanska's webpage. A summary of Skanska's development on green construction will be available in the Sustainability Report which is a part of Annual Report, thus audited.

Skanska will on an annual basis report on the impact of the assets environmental aspects during the life of bond. Thus, impact reporting is on a project by project basis. The Impact reporting will be reviewed and approved by the Green Bond Committee. The table below provides examples of the impact reporting that may be provided. The reported impact is estimated impact due to the fact that Skanska is a project developer and will divest the project upon completion and will not have the possibility to follow up on the actual performance. The estimations will be done in accordance with legislation or established and credible standards and processes.

Green Bond Principles category	Details	SDG	Impact Indicator
Green Buildings	Energy Efficiency Estimated annual amount of energy savings in relation to legislations and building codes in the country/state of the project.	7, 13	MWh
	Estimated annual GHG emissions avoided due to energy savings		tCO ₂ e
	Renewable Energy Estimated renewable energy produced annually on the asset or off the asset. If produced off the asset it is added capacity materialized when investing in the development of the asset.		MWh
	Estimated annual GHG emissions avoided.		tCO_2e
Pollution prevention and control	Calculated carbon footprint of the assets embodied carbon	13	kg CO ₂ e/m ² gross area
Sustainable Water & Waste Water Management	Estimated saved quantity of potable water annually as a result of reduced water consumption in relation to legislation and building codes in the country of the project.	6	m ³
Climate Change Adaptation	Points earned for climate change adaptation defined by the building rating system the asset has been certified by.	13	Points awarded in relation to points available

Table 1 Examples of impact reporting

Documents reviewed

The table below lists the documents that formed the basis for this Second Opinion:

Document/site Name	Description
Skanska Green Bond framework March 2018	
	Information on building classify-cation schemes
DGNB: p.1-21	cation schemes
<u>Svanen</u>	
Skanska's Environmental Policy	Skanska's Environ- mental Policy
	Skanska's Sustainability Report
Journey to Deep Green	Skanska: Journey to Deep Green
Building Information Modelling	Green BIM
Green Thinking Book	Skanska Green Thinking Book
Sustainability timeline	Skanska Sustain- ability Timeline
Awards and recognitions	Sustainability awards and recognitions
	LEED BREEAM DGNB: p.1-21 Svanen Skanska's Environmental Policy Skanska Sustainability Report Journey to Deep Green Building Information Modelling Green Thinking Book Sustainability timeline

Table 2 Documents reviewed

3 Assessment of Skanska's Green Bond framework and environmental policies

Overall, Skanska's green bond framework provides a detailed and sound framework for climate-friendly investments.

The framework and procedures for Skanska's green bond investments are assessed and their strengths and weaknesses are discussed in this section. The strengths of an investment framework with respect to environmental impact are areas where it clearly supports low-carbon projects, whereas the weaknesses are typically areas that are unclear or too general. Pitfalls are also raised in this section to note areas where issuers should be aware of potential macro-level impacts of investment projects.

Eligible projects under the Green Bond Framework

At the basic level, the selection of eligible project categories is the primary mechanism to ensure that projects deliver environmental benefits. Through selection of project categories with clear environmental benefits, green bonds aim to provide certainty to investors that their investments deliver environmental returns as well as financial returns. The Green Bonds Principles (GBP) state that the "overall environmental profile" of a project should be assessed and that the selection process should be "well defined".

Category	Eligible project types	Green Shading and some concerns
Green Building	Certified commercial properties and/or commercial properties under construction to be certified in accordance with:	Light to Medium green ✓ Building criteria are good, but not the best.
	 ✓ LEED (minimum certification "gold"); or ✓ BREEAM International, Sweden or Norway as applicable (minimum certification "very good"); or ✓ DGNB Denmark (minimum 	✓ There are no additional energy efficiency requirements in the framework.
	certification "guld");	✓ In addition to climate issues, BREEAM, LEED, DGNB
	Residential properties under construction certified or to be certified in accordance with:	and Svanen cover a broader set of issues, which is important to overall
	✓ Nordic Label (Svanen)	sustainable development.
		✓ In a low carbon 2050 perspective the energy performance of buildings is expected to be improved,

with passive and plus house technologies becoming mainstream and the energy performance of existing buildings greatly improved through refurbishments.

Table 2. Eligible project categories

Strengths

Through its strategic framework and other policies, Skanska is deeply committed to contribute to a green transition towards a low carbon and energy efficient society in the longer run. Thus, Skanska has quantitative targets and milestones for what they call Green and Deep Green buildings. Green buildings are expected to be 15% more energy efficient than current local standards, while Deep Green buildings are (near) zero emission standards. Skanska also has mandatory ISO 14.001 certifications which means that environmental risks management is mandatory. Skanska's code of conduct also covers all sustainability areas and risks and will be included in all supplier contracts. Thus, overall, Skanska shows a deep commitment to a green transition in the building sector, including energy and climate aspects.

Skanska Commercial Development projects represents a field for Skanska to implement sustainable solutions. As Skanska is leading the whole design and execution process, it is a great opportunity optimize project's environmental influence and take into account design for positive social impact. At the same time most of the projects are third party certified and verified in LEED, BREEAM or DGNB schemes assuring that implemented solutions are in line with up to date technologies. For Nordic Label Svanen, Skanska Financial Services will select the Eligible Projects together with the Sustainability Department in Skanska Sweden and Skanska Nya Hem.

It is a strength that Skanska has engaged an independent assurance provider to verify the selection of Eligible Assets is in line with the Green Bond framework.

The reporting and validation procedures are described in the Green Bond framework. The Green Bond framework supports regular and transparent updates to investors and the public. It is a strength that the issuer will report on (estimated) impacts and list all projects. A summary of Skanska's development on green Construction will be available in the Sustainability Report which is a part of Annual Report, thus audited. Skanska will on an annual basis report on the impact of the assets environmental aspects during the life of bond. Thus, impact reporting is on a project by project basis. The Impact reporting will be reviewed and approved by the Green Bond Committee.

Weaknesses

The building criteria for eligible projects are good but do not represent the best available technologies since the highest certification levels are not required. Besides this, there are no obvious weaknesses in Skanska's green bond framework.

Pitfalls

Green building certifications include many important environmental aspects. However, these certifications alone do not necessarily ensure improved energy performance or that resilience aspects are taken into considerations.

For example, it is possible to achieve a LEED Gold certificate with no energy efficiency credits. In a low carbon 2050 perspective the energy performance of buildings is expected to be improved, with passive and plus house technologies becoming mainstream and the energy performance of existing buildings greatly improved through refurbishments. The Skanska framework is not quite there yet but is taking valuable steps towards this long-term vision. More stringent criteria, in particular with respect to energy efficiency, would have been required for a darker shading.

Some projects may be heated by district heating, where one cannot entirely guarantee the absence of fossil fuels.

Impacts beyond the project boundary

Due to the complexity of how socio-economic activities impact the climate, a specific project is likely to have interactions with the broader community beyond the project borders. These interactions may or may not be climate-friendly, and thus need to be considered with regards to the net impact of climate-related investments.

Rebound effects

Efficiency improvements may lead to rebound effects. When the cost of an activity is reduced there will be incentives to do more of the same activity. Skanska should be aware of such effects and possibly avoid Green Bond funding of projects where the risk of rebound effects is particularly high.

Appendix: About CICERO

CICERO Center for International Climate Research is Norway's foremost institute for interdisciplinary climate research. We deliver new insight that helps solve the climate challenge and strengthen international climate cooperation. We collaborate with top researchers from around the world and publish in recognized international journals, reports, books and periodicals. CICERO has garnered particular attention for its work on the effects of manmade emissions on the climate and the formulation of international agreements and has played an active role in the UN's IPCC since 1995.

CICERO is internationally recognized as a leading provider of independent reviews of green bonds, since the market's inception in 2008. CICERO received a Green Bond Award from Climate Bonds Initiative for being the biggest second opinion provider in 2016 and from Environmental Finance for being the best external review provider (2017).

CICERO Second Opinions are graded dark green, medium green and light green to offer investors better insight in the environmental quality of green bonds. The shading, introduced in spring 2015, reflects the climate and environmental ambitions of the bonds in the light of the transition to a low-carbon society.

CICERO works with both international and domestic issuers, drawing on the global expertise of the Expert Network on Second Opinions. Led by CICERO, ENSO is comprised of trusted research institutions and reputable experts on climate change and other environmental issues, including the Basque Center for Climate Change (BC3), the Stockholm Environment Institute, the Institute of Energy, Environment and Economy at Tsinghua University and the International Institute for Sustainable Development (IISD). ENSO operates independently from the financial sector and other stakeholders to preserve the unbiased nature and high quality of second opinions.

cicero.oslo.no/greenbonds



