



YIT

Green Bond Second Opinion

March 15, 2021

YIT is a Finnish urban developer and construction company with a significant North European presence. YIT develops and builds various types of infrastructure such as buildings, transportation, but also mining related infrastructure. Three-quarters of YIT's revenue is derived from operations in Finland, while another 10% comes from its operations in Russia. In 2020, 50% of YIT's revenues were derived from housing, 25% from business premises and partnership properties, and 25% from its infrastructure work.

It is expected that the majority of eligible projects under this green finance framework will be investments in new and existing buildings incl. land for development with minimum criteria lacking ambition and not substantively exceeding regulations for energy efficiency. Investments will mainly be in Finland and buildings can be residential as well as commercial buildings, among others for malls, hotels and logistics and the issuer does not screen out fossil intensive users, such as from heavy industry. A secondary criterion is defined through certification schemes that could be more stringent as they do not ensure low climate or environmental impact. YIT risks locking in district heating from mainly fossil fuels. However, the issuer noted that heating directly with fossil fuels, e.g., gas heating in buildings, is excluded and the company aims at providing more geothermal heating in its self-developed properties.

Green bond proceeds are allocated to projects in Europe and also include clean transportation, renewable energy and pollution prevention and control as well as in climate change adaptation infrastructure. Construction equipment can be powered with fossil fuels. YIT includes data centers with relatively high energy demand and unspecified users. In general, as the selection criteria are in part broad and include fossil fuel aspects the issuer is encouraged to provide extra transparency on these aspects.

The governance of the framework fits well within YIT's current investment process, but would have benefitted from sustainability experts having a clear voice in final decision making. YIT aims at reducing CO_{2e} emissions of own operations (incl. energy consumption, waste and business flights) and its self-developed projects (related to reducing the CO_{2e} emissions of materials) by 2030. In some cases, Environmental impact assessments required by law, but they are not generally required by YIT. Moreover, reporting on impact is suitable, but is not externally verified and could have been more focused on providing project-level data.

Based on the overall assessment of the project types that will be financed by the green finance, governance, and transparency considerations, YIT's green finance framework receives a **CICERO Light Green** shading and a governance score of **Good**. The framework would benefit from stricter energy efficiency criteria and a more thoroughly considered impact of building materials and climate risks. In addition, making environmental impact assessments and life cycle analyses standard practice for their investment processes would enhance the framework.

SHADES OF GREEN

Based on our review, we rate the YIT's green finance framework **CICERO Light Green**.

Included in the overall shading is an assessment of the governance structure of the green finance framework. CICERO Shades of Green finds the governance procedures in YIT's framework to be **Good**.



GREEN BOND and LOAN PRINCIPLES

Based on this review, this Framework is found in alignment with the principles.





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1 Terms and methodology

This note provides CICERO Shades of Green's (CICERO Green) second opinion of the client's framework dated March 2021. This second opinion remains relevant to all green bonds and/or loans issued under this framework for the duration of three years from publication of this second opinion, as long as the framework remains unchanged. Any amendments or updates to the framework require a revised second opinion. CICERO Green encourages the client to make this second opinion publicly available. If any part of the second opinion is quoted, the full report must be made available.

The second opinion is based on a review of the framework and documentation of the client's policies and processes, as well as information gathered during meetings, teleconferences and email correspondence.

Expressing concerns with 'Shades of Green'

CICERO Green second opinions are graded dark green, medium green or light green, reflecting a broad, qualitative review of the climate and environmental risks and ambitions. The shading methodology aims to provide transparency to investors that seek to understand and act upon potential exposure to climate risks and impacts. Investments in all shades of green projects are necessary in order to successfully implement the ambition of the Paris agreement. The shades are intended to communicate the following:

CICERO Shades of Green



Dark green is allocated to projects and solutions that correspond to the long-term vision of a low carbon and climate resilient future. Fossil-fueled technologies that lock in long-term emissions do not qualify for financing. Ideally, exposure to transitional and physical climate risk is considered or mitigated.



Medium green is allocated to projects and solutions that represent steps towards the long-term vision, but are not quite there yet. Fossil-fueled technologies that lock in long-term emissions do not qualify for financing. Physical and transition climate risks might be considered.



Light green is allocated to projects and solutions that are climate friendly but do not represent or contribute to the long-term vision. These represent necessary and potentially significant short-term GHG emission reductions, but need to be managed to avoid extension of equipment lifetime that can lock-in fossil fuel elements. Projects may be exposed to the physical and transitional climate risk without appropriate strategies in place to protect them.

Examples



Wind energy projects with a strong governance structure that integrates environmental concerns



Bridging technologies such as plug-in hybrid buses



Efficiency investments for fossil fuel technologies where clean alternatives are not available

Sound governance and transparency processes facilitate delivery of the client's climate and environmental ambitions laid out in the framework. Hence, key governance aspects that can influence the implementation of the green bond are carefully considered and reflected in the overall shading. CICERO Green considers four factors in its review of the client's governance processes: 1) the policies and goals of relevance to the green finance framework; 2) the selection process used to identify and approve eligible projects under the framework, 3) the management of proceeds and 4) the reporting on the projects to investors. Based on these factors, we assign an overall governance grade: Fair, Good or Excellent. Please note this is not a substitute for a full evaluation of the governance of the issuing institution, and does not cover, e.g., corruption.



2 Brief description of YIT's green finance framework and related policies

YIT is a Finnish urban developer and construction company that has a significant North European presence. YIT develops and builds apartments, business premises and entire areas. YIT also specializes in infrastructure construction; including railways, light rail systems, metros, power plants, such as wind and water power, data centers, water supply plants, industrial plants and various kinds of underground facilities, roads, bridges, harbors, airports, mines, parking facilities and sports halls. YIT owns properties together with its partners and provides its customers with services. YIT employs approximately 7,400 professionals and operates through five business segments across 10 countries in Northern Europe. In 2020, 50% of YIT's revenues were derived from housing (41% in Finland and CEE countries, and 9% in Russia), 25% from business premises and partnership properties, and 25% from its infrastructure work. Across all lines of business, 73% of YIT's 2020 revenue was earned from its operations in Finland.

Environmental Strategies and Policies

Stepping up sustainability is one of the four cornerstones of YIT's strategy. To execute on its strategy, YIT has launched four development programs: Performance, Customer Focus, Services Development and Green Growth. YIT's operations rest upon a series of policies and procedures which includes YIT's Code of Conduct, Sustainability Policy, Environment Principles and Supplier Code of Conduct.

In 2020, YIT's Scope 1, 2 and 3 emissions were 39,776 tCO_{2e}, 24,899 tCO_{2e}, and 7,119 tCO_{2e}, respectively. Total emissions from own operations decreased 29% from the previous year. Scope 3 emissions only include waste and business flights related emissions. Also, the share of renewable electricity consumptions rose to 56% while overall energy consumption decreased by 8%. Each year, YIT sets targets and performance indicators for each of its material sustainability themes and reports on their implementation.

YIT has established climate targets for 2030 that will support the annual targets set for sustainable development, including:

- Emissions: halving the carbon dioxide equivalent (CO_{2e}) emissions of the Group's own operations (incl. energy consumption, waste and business flights) and its self-developed projects (related to reducing the CO_{2e} emissions of materials) by 2030, using 2019 as the baseline.
- Carbon neutrality: enabling carbon-neutral heating, cooling and hot water in YIT's self-developed projects.
- Reporting: report on project-specific CO_{2e} emission indicators from 2020 onwards in self-developed projects.

YIT acknowledges that achieving the 2030 targets will require improving its operational efficiency and reducing waste, implementing new circular economy and low-carbon solutions, and making broader use of renewable energy. It also acknowledges that 80% of its CO_{2e} emissions derive from its self-developed projects¹, materials, and 20% from own operations (mainly energy consumed at construction sites; thus, increasing cooperation with suppliers and establishing strong partnerships will also be key in order to deliver on the targets. Moreover, CO_{2e} calculations will be incorporated into the decision-making processes both within YIT and for its selected partners.

¹ Issuer defines self-developed projects as projects that are developed, built and sold by YIT and typically started without an end customer identified. For other YIT projects, not self-developed, the customer exists at the start of the project (e.g. light railway built for a city).



Reaching the climate targets also involves moving into new areas. For example, YIT intends to expand its service offering to also become further involved in the use-phase of the properties. This will allow YIT to take more responsibility for reducing emissions in the full life-cycle of properties by, for example, becoming a provider of renewable energy such as geothermal heating.

The reporting is conducted in accordance with the Global Reporting Initiative (GRI). YIT also reports its climate impact to the Carbon Disclosure Project (CDP). According to the issuer, YIT has performed climate risk and opportunity assessment with 2 different scenarios in order to prepare to report according to TCFD.

Use of proceeds

The net proceeds from the green debt will be used to finance or refinance, in whole or in part, investments undertaken by YIT that promote the transition towards a low-carbon, circular economy and other sustainability goals that are in accordance with the green project categories: green and energy efficient buildings, renewable energy, clean transportation and technologies, pollution prevention and control and protection of ecosystem services, and climate change adaptation. The issuer expects the majority of proceeds to go to financing of new projects and has communicated a look-back period of three years for refinancing. The issuer did not clarify allocation across eligible project categories.

Exclusion list: Net proceeds will not be allocated to projects involving the production of fossil energy, fossil fuel infrastructure, nuclear energy generation, weapons and defense, potentially environmentally harmful resource extraction (such as rare-earth elements or fossil fuels), mining, gambling or tobacco. According to the issuer, YIT will also not construct buildings that are heated by fossil fuels directly, but may construct buildings connected to fossil fuel based district heating.

Selection

The selection process is a key governance factor to consider in CICERO Green's assessment. CICERO Green typically looks at how climate and environmental considerations are considered when evaluating whether projects can qualify for green finance. The broader the project categories, the more importance CICERO Green places on the governance process.

YIT has designed and implemented a process to ensure that only projects aligned with the eligibility criteria are selected as eligible assets and projects. A Green Finance Committee (GFC) that includes YIT's Chief Executive Officer, EVP, Urban Development, and Chief Financial Officer has been established for the implementation of this selection process and will convene every six months or when otherwise considered necessary. The GFC makes consensus decisions.

The following process will be used for the evaluation and selection of eligible green projects:

- (i) Sustainability experts and representatives within YIT evaluate potential Green Projects, their compliance with the Green Project categories, and their environmental benefits.
- (ii) A list of the potential Green Projects are presented to YIT's GFC.

The GFC holds the right to exclude any green project already funded by the net proceeds. If a green project is sold, or for other reasons loses its eligibility, funds will then follow the procedure under management of proceeds until reallocated to other eligible green projects.



Management of proceeds

CICERO Green finds the management of proceeds of YIT to be in accordance with the Green Bond and Loan Principles.

YIT will use a Green Register to monitor that an amount equal to the net proceeds is allocated to green projects. The purpose of the Green Register is to ensure that net proceeds only support the financing of green projects or to repay green debt. The management of proceeds will be reviewed by an independent verifier appointed by YIT.

Unallocated net proceeds may temporarily be placed in the liquidity reserve and managed accordingly by YIT. Temporary holdings will not be placed in entities with a business plan focused on fossil energy production, fossil fuel infrastructure, nuclear energy generation, weapons and defense, potentially environmentally harmful resource extraction, gambling or tobacco. According to the issuer, temporary investments are likely to be cash on bank accounts.

Reporting

Transparency, reporting, and verification of impacts are key to enable investors to follow the implementation of green finance programs. Procedures for reporting and disclosure of green finance investments are also vital to build confidence that green finance is contributing towards a sustainable and climate-friendly future, both among investors and in society.

YIT will annually and until maturity of the green bonds issued, provide investors with a report (Green Finance Framework Impact Report) describing the allocation of proceeds and the environmental impact of the green projects. The report will be published on YIT's website together with the Green Finance Framework.

The company is expected to report on both allocation and aggregated impacts. Allocation reporting will include, e.g., a summary of green debt developments; the total proportion of green debt net proceeds used to finance new green projects and the proportion of green debt net proceeds used to refinance green projects; as well as the total aggregated proportion of green debt net proceeds used per green project category. The impact reporting aims to disclose the environmental impact of the green projects financed under its framework and will be based on a list of Key Performance Indicators (KPIs) provided in the framework for each project category.

In the event of outstanding green commercial paper, YIT will report quarterly on the value of green projects and the total amount of outstanding green debt.



3 Assessment of YIT’s green finance framework and policies


The framework and procedures for YIT’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; weaknesses are typically areas that are unclear or too general. Pitfalls are also raised in this section to note areas where YIT should be aware of potential macro-level impacts of investment projects.

Overall shading

Based on the project category shadings detailed below, and consideration of environmental ambitions and governance structure reflected in YIT’s green finance framework, we rate the framework **CICERO Light Green**.

Eligible projects under the YIT’s green finance 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 investors with certainty 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 and energy efficient buildings 	<p>The financing or refinancing of the development, construction, establishment, acquisition, expansion, or upgrade/modification of buildings that meet the criteria defined below.</p> <p>New buildings, residential The construction of new² buildings designed to achieve:</p> <ul style="list-style-type: none"> • an energy performance certificate (EPC) with energy class A or B (relating to local standards) and one of the following criteria: <ul style="list-style-type: none"> • Nordic Swan Ecolabel certification • the Finnish RTS environmental 	<p>Light Green</p> <ul style="list-style-type: none"> • The issuer informs us that the majority of the green bond proceeds will be deployed in Finland, but projects can be in the European Union. • New residential and commercial buildings that are not necessarily more efficient than regulations can be included under the framework. • Investors should be aware that proceeds that are allocated to existing buildings may fund buildings that were only built according to regulation at the time. • Commercial buildings can include hotels and malls. The issuer does not screen out fossil intensive users of commercial buildings, such as from

² May cover land held for development and its development costs, and development costs related to buildings under construction that will, once completed, reach the eligibility criteria for the category



classification, 2 stars or better

- Miljöbyggnad Silver or better
- LEED certification with a level of “Gold” or better
- BREEAM certification with a level of “Very Good” or better
- Achieve an energy use of at least 10% lower than required by the relevant national building regulation
- Projects aiming to implement low-carbon solutions leading to significantly lower life-cycle emissions of the building, such as circular economy solutions, choosing materials such as wood or low-carbon concrete with a considerably lower carbon footprint than conventional materials, or solutions enabling the use of renewable energy such as geothermal heat sources, or projects for which CO2 emission indicators are calculated for in the design phase. This, in order to ensure that the projects financed are contributing to YIT meeting its climate targets for 2030.

New buildings, commercial

The construction of new commercial buildings³ designed to achieve an EPC with energy class A or B (relating to local standards) and one of the following criteria:

heavy industry. The mining industry is excluded under the framework.

- Refurbishment of existing buildings are often better than new constructions from a climate point of view. According to IEA, efficiency of building envelopes needs to improve by 30% by 2025 to be aligned with the Paris target. The issuer stated they are interested in converting the buildings they renovate that are powered by fossil fuels to renewable sources, but that it is not a requirement.
- The issuer informs us that 80% of emissions are derived from materials in self-developed projects. Therefore, stringent supplier agreements would strengthen likelihood of meeting climate targets.
- The issuer noted that the client decides on heating source of building. The issuer will not construct buildings for which direct heating is fossil fuels based, but may include fossil fuel based district heating which features a risk of lock-in of emissions. The issuer informed us that in many cases buildings can be switched to renewable heating.
- The use of district heating can represent a pitfall as in Finland 53 percent of the district heat was produced with fossil fuels and peat in 2018.
- The mentioned certification schemes cover a broad set of issues, but the required levels of certification do not guarantee low climate and environmental impacts.
- YIT evaluates more low-carbon construction equipment, but equipment is currently largely powered by fossil fuels.
- The issuer did not include a threshold for energy efficiency improvement.

³ May cover land held for development and its development costs, and development costs related to buildings under construction that will, once completed, reach the eligibility criteria for the category



- Nordic Swan Ecolabel certification
- the Finnish RTS environmental classification, 2 stars or better
- Miljöbyggnad Silver or better
- LEED certification with a level of “Gold” or better
- BREEAM certification with a level of “Very Good” or better

Existing buildings

Buildings:

- with an active EPC with energy class A or B and one of the following criteria:
 - Nordic Swan Ecolabel certification
 - LEED certification with a level of “Gold” or better
 - BREEAM certification with a level of “Very Good” or better
 - the Finnish RTS environmental classification, 2 stars or better
 - Miljöbyggnad Silver or better

Data centers

Data centers and related technology which achieve, or are designed to achieve once completed, a Power Usage Effectiveness (PUE) which is at least below 1.8 and which use 100 per cent renewable energy. Data centers will only be located in Finland and Sweden and will not be used for Bitcoin mining.

Major renovations

Renovations of existing buildings that lead to a reduction in the

This could lead to locking-in buildings that are directly or indirectly linked to fossil fuels, but meet external certifications.

- For data centers, the efficiency requirements are not sufficiently high as 1.8 is only 10% better than the global average. Be aware of rebound effects due to increased energy consumption due to higher data traffic as a result of energy efficiency improvements. According to the issuer, they aim to reuse the excessive heat which will give the Data center a slightly higher PUE.
- Concerns exist regarding sustainability of IT equipment in data centers (e.g, supply chain emissions) and recycling processes.
- For some data centers, emergency power generators can still run on diesel.
- The Finnish climate guide mentioned that increased rainfall, and snowfall being replaced by rainfall in winter, will probably increase river flows and floods in Finland. Therefore, the buildings could be increasingly exposed to physical climate risks in the future. According to the issuer, YIT offers solutions regarding climate risks in the climate change adaptation category.
- Environmental impact assessments, life cycle analyses and climate risk screenings are currently not standard practice across all projects.



life-cycle emissions by at least 30 per cent compared to the pre-investment situation.

Individual measures to improve energy efficiency and life-cycle emissions

Direct costs (e.g. material, installation and labor costs) for installing energy efficient technologies or other energy saving measures during the construction, maintenance and service phase of a building. These measures may include energy management systems, AI and data solutions, heat exchangers, heat pumps or costs for enabling renewable energy sources. This, provided that the measure is aimed at significantly improving the energy performance or life-cycle emissions of the building, construction site or in the respective area.

Renewable energy The financing or refinancing of the construction or operation of renewable energy facilities and their related infrastructure (e.g. grid connections and foundations), either in relation to existing buildings or as stand-alone investments.



Solar power

- The construction and installation of solar power technologies, such as Photovoltaic systems (PV), concentrated solar power (CSP) and solar thermal facilities.

Wind power

- The construction of wind power infrastructure such as wind energy facilities and foundation solutions for wind power installations.

Dark Green.

- Wind power could be controversial and a current absence of environmental impact assessments, life cycle analyses and climate risk screenings as standard practice heightens risk. However, YIT screens whether a detailed environmental impact assessment is required.
- YIT informed us that the company has a stringent investment procedure that follows certain steps and gates that also ensure avoidance of land-use conflicts.
- Geothermal plants can still feature emissions and could lead to broader environmental impacts and local pollution. The issuer informed us that local pollution is not a major concern in Finland and the issuer clarified that



Geothermal energy

- Geothermal power plants and geothermal heating/cooling systems operating at lifecycle emissions lower than 100gCO₂e/kWh.

Storage facilities

- Facilities and technologies enabling the storage of electricity and thermal energy.

Other renewable energy projects

- Facilities and technologies enabling a more efficient use of renewable energy production, such as virtual power plants that help balance the usage of the network, thereby reducing CO₂ emissions.

YIT is currently not involved in any major geothermal plants and YIT's geothermal projects only involve wells of smaller size. According to YIT, heat pumps use electricity and geothermal solutions combined with non-green electricity has an emission level of around 35-42g CO₂/kWh.

- The issuer clarified that storage facilities will typically store energy from solar panels and electricity stored in batteries (e.g. electric vehicle batteries).
- The issuer informs us, that YIT will conduct an environmental impact assessment if required by law or environment authorities.
- Issuer noted that virtual power plant help balance power consumption (in the main grid), decrease the need for reserve power and reduce carbon dioxide emissions.
- The issuer informed us that hydro power is excluded from financing.

Clean transportation and technologies



The financing or refinancing of the construction and investments zero emission vehicles, machinery and their related infrastructure, and public transportation infrastructure.

Zero emission vehicles & machinery

- Zero emission vehicles (hydrogen/electric)
- Battery-electric machinery and equipment used at construction sites (excluding mining equipment).

Infrastructure for electric vehicles

- Infrastructure supporting electric vehicles, such as charging stations and infrastructure preparing for electric vehicle charging provisions, both in

Medium Green

- The issuer does not invest in public transportation vehicles but the construction of railway, light rail, and metro system, which is linked to significant construction emissions and may have broader environmental impacts (e.g. power source of public transportation vehicles).
- However, railway operators could run fossil fuel powered trains on railway lines.
- The issuer has not outlined specific eligibility criteria or environmental ambitions for stations associated with public transportation infrastructure.
- The issuer informed us, when necessary, it will conduct environment impact assessments of its public transportation infrastructure operations. Assessments are not mandatory.



relation to buildings and generally available electric vehicles charging infrastructure.

Public transportation infrastructure

- Infrastructure enabling public transportation, such as metro stations, light rail systems and railways, but excluding roads.

Pollution prevention and control and protection of ecosystem services



The financing or refinancing of the construction and investments into solutions and technologies contributing to a reduction in the generation of waste and/or improvement in the recycling/reuse of waste in the construction of buildings and infrastructure, including for example:

Waste management

- Measures that improve the sorting of waste and prevention of waste generation at the construction sites, including e.g. technologies and processes that improves the monitoring and planning of material volumes.
- The processing and recycling of surplus materials, such as soil materials, for the purpose of using them in other applications - resulting in a reduced need for virgin raw materials.
- Construction of waste management facilities such as recycling centers.

Wastewater management

- Construction of wastewater treatment plants.

Protection of eco-system services

- Measures to protect, restore and enhance ecosystems and biodiversity (aquatic as well as on land), such as soil restoration,

Medium Green

- According to the issuer, they will not provide projects with fossil fuel based energy technologies. However, the issuer noted that client decides the energy source for their facilities during the use phase which may not be most efficient and lock-in a suboptimal source.
- Currently, the issuer does not have a usage reduction target for virgin raw materials.
- The issuer informed us that Waste-to-Energy projects are excluded.



the integration of urban green and blue spaces such as vegetation and ponds, and wildlife crossings etc.

Climate change adaptation



The financing or refinancing of measures and activities that contribute to a substantial reduction in the exposure to physical climate risks, relevant for the regions where YIT operates.

- Investments in adaptation measures aimed at strengthening an asset to withstand physical climate risks over its lifetime, posed by both current weather variability and future climate risks. These measures may include sensors and other technologies that enable monitoring and addressing risks related to climate change in real time. For example, floodwater solutions, urban runoff control mechanisms, dam structures, rainwater treatment solutions, nature-based solutions such as green spaces and vegetation addressing climate risks.

Dark Green

- Issuer stated that measures financed under this category are separate and that adaptation of roads, fossil fuel intensive infrastructure and mining, and fossil fuel production facilities is not planned.
- The issuer did not disclose any processes by which to address the construction emissions from adaptation solutions or to address auxiliary environmental concerns that may result from investments in adaptation measures.

Table 1. Eligible project categories

Background

According to the International Energy Agency (IEA), the buildings and buildings construction sectors combined are responsible for 36% of global final energy consumption in 2018 and nearly 40% of total direct and indirect CO₂ emissions. Appliances (excluding heating, cooking and cooling appliances) are responsible for around 17% of final electricity use by buildings. Emissions from buildings are approximately half coming from materials/construction and half from energy use. The energy and emissions savings potential remain largely untapped because of continued use of less efficient technologies, lack of effective policies and weak investments in sustainable buildings. The IEA’s Sustainable Development Scenario suggests 50% of new constructed building area in 2030 to be near zero emission – in addition to increased renewable heat sources up to 25% in 2030.⁴ Energy efficient buildings are crucial important building blocks towards reaching the 2°C goal.

⁴ <http://www.iea.org/tcep>



Commercial buildings are a catalyst for transport demand. Transport is responsible for 20% of GHG emissions in the EU when excluding aviation and maritime transport⁵. Clean transportation is therefore an important element of climate mitigation strategies in conjunction with energy performance of buildings.

In Finland, a significant share of Finland's greenhouse gas emissions is produced by buildings, as they account for some 38 % of the final energy consumption of the country. The energy consumed in housing was around 65 TWh in 2019 (with indoor living space heating representing the main source of energy consumption on household (67%)), and nearly one-third of consumption was provided by district heat and one-fifth wood, followed by electricity and heat pump energy⁶. The share of fossil fuels in the district heating network in Finland has remained almost unchanged throughout the years but the use of peat increased by seven per cent, thus representing 53% of the district heat that was produced with fossil fuels and peat in 2018⁷.

As member of the EU, Finland is subject to the EU's climate targets of reducing collective EU greenhouse gas emissions by 40% by 2030 compared to 1990 levels, increasing the share of renewable energy to 32% and improving energy efficiency by at least 32.5%⁸. The European Green Deal aims for carbon neutrality by 2050⁹. Finland has developed the National Energy and Climate Plan (NECP) that outlines the actions and strategies that will enable Finland to attain the targets specified in the Government Programme and adopted in the EU for 2030, and to systematically set the course for achieving an 80% – 95% reduction in greenhouse gas emissions by 2050 in all sectors¹⁰. These strategies include measures such as phasing out the use of coal for energy, increasing the share of transport biofuels and renewable energy, and developing the electricity market. Climate change mitigation measures associated with the built environment are also considered in the Land Use and Building Act, and includes land use decisions, energy-efficient new construction and renovations, building maintenance, material efficiency and the utilization and promotion of renewable energy¹¹. The National Decree of the Ministry of the Environment on the Energy Performance of New Buildings also sets minimum requirements for building energy performance¹², setting the energy performance value (E-value) equivalent or below 90 kWh/m², corresponding to an EPC rating of an average of B. However, the current (2018) level of EPC ratings of the residential sector in Finland is D (39%) and E (28%) for older building. 1% of the total stock is level A and 11% level B¹³.

Governance Assessment

Four aspects are studied when assessing the YIT's governance procedures: 1) the policies and goals of relevance to the green finance framework; 2) the selection process used to identify eligible projects under the framework; 3) the management of proceeds; and 4) the reporting on the projects to investors. Based on these aspects, an overall grading is given on governance strength falling into one of three classes: Fair, Good or Excellent. Please note this is not a substitute for a full evaluation of the governance of the issuing institution, and does not cover, e.g., corruption.

YIT has adopted relevant key performance indicators that link to and support the implementation of this framework. YIT has established company-wide climate targets for 2030 on emissions, carbon neutrality and reporting. YIT's reporting is conducted in accordance with the Global Reporting Initiative (GRI) and it also reports its climate impact to the Carbon Disclosure Project (CDP). The issuer has also started to engage with suppliers on

⁵ <https://www.eea.europa.eu/data-and-maps/indicators/transport-emissions-of-greenhouse-gases/transport-emissions-of-greenhouse-gases-11>

⁶ [Statistics Finland - Energy consumption in households 2019](https://www.stat.fi/en/energy-consumption-in-households-2019)

⁷ [Statistics Finland - Production of electricity and heat 2018](https://www.stat.fi/en/production-of-electricity-and-heat-2018)

⁸ https://ec.europa.eu/clima/policies/strategies/2030_en

⁹ https://ec.europa.eu/info/strategy/priorities-2019-2024/european-green-deal_en

¹⁰ [National Energy and Climate Strategy of Finland for 2030 – Policies - IEA](https://www.inea.europa.eu/en/national-energy-and-climate-strategy-of-finland-for-2030-policies)

¹¹ https://julkaisut.valtioneuvosto.fi/bitstream/handle/10024/79247/TEMjul_12_2017_verkkojulkaisu.pdf?sequence=1&isAllowed=y

¹² <https://www.ym.fi/download/noname/%7BE12CDE2C-9C2B-4B84-8C81-851349E2880B%7D/140297>

¹³ [Suomen-EPBD-2a-ilmoitus_final_10-03-2020-242AE19E_F497_4A38_8DF2_95556530BA53-156573.pdf \(ym.fi\)](https://www.ymparisto.fi/download/noname/%7B242AE19E-F497-4A38-8DF2-95556530BA53-156573.pdf)

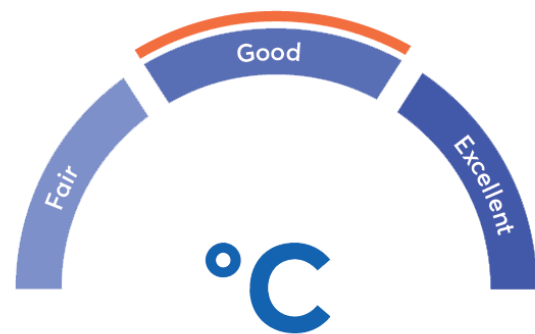


climate issues. According to the issuer, YIT has performed climate risk and opportunity assessment with 2 different scenarios in order to prepare us to report according to TCFD.

Final investment decisions for major projects sits with YIT's Chief Executive Officer and is the result of a gated approach. The decisions on projects for which the green bond proceeds will be used will also be subject to an assessment by the GFC. The GFC makes consensus decisions; decisions that will be supported by YIT's sustainability experts and representatives. While sustainability experts support decisions, it is unclear that sustainability professionals, internal or external to YIT, have a clear voice in final decisions. As well, the issuer informed that environmental impact assessments are not mandatory for investment which increases environmental risks.

YIT will annually and until maturity of the green bonds issued, provide investors with a report (Green Finance Framework Impact Report) describing the allocation of proceeds and the environmental impact of the green projects. The report will be published on YIT's website together with the Green Finance Framework. Reporting on impact is suitable but is not externally verified and could have been more focused on providing project-level data.

The overall assessment of YIT's governance structure and processes gives it a rating of **Good**.



Strengths

YIT's governance system whereby the CEO sits as the final decisionmaker on all investments and will sit on the GFC is a strength of the framework as it involves the top management into key decision processes of the framework. As a large company, YIT's governance structures are key to highlighting lines of responsibility and assuring investors who is ultimately responsible for the performance of the green bond proceeds. However, veto power of sustainability experts would further strengthen the governance process.

YIT has also demonstrated over the past few years its dedication to meet the company-wide climate targets. Significant decreases in its emissions and increased in renewable energy consumption while decreasing its overall electricity consumption signifies that the green bond is a part of larger reductions of climate impact. The green bond will fit into the evolving culture of YIT toward more climate responsible practices, it is not the only practice.

Weaknesses

As the issuer has many lines of business, the project categories to which the green bond proceeds will be applied are quite broad. As operations are multinational, it is evident that the eligibility criteria will vary which allows for ambiguity over the impact of the bond proceeds as each category of investment in each country delivers unique levels of impact. Especially in the category green and energy efficient buildings, eligibility criteria and the potential inclusion of business-as-usual projects constitutes a clear weakness.

Pitfalls

As buildings are the most important stream of the issuer's business, a lack of ambitiousness in this sector may have the issuer investing in buildings that do not meet future national standards. The eligibility criteria for buildings allows for buildings that lock-in fossil fuel usage via electricity and heat demand. In addition, the building criteria



do not specifically speak to building materials used in the construction phase or access to clean transportation networks once the construction is complete.

Although the issuer has stated that they predict most of the proceeds of the bond to be used in Finland, they have operations in other countries across Europe that do not have the same national environmental standards and/or may not be improving their standards at the same pace of Finland. CICERO Shades of Green encourages YIT to closely monitor these effects and to be fully transparent on the types of projects as well as the respective ambition levels.

The issuer was clear that the clients of its construction operations choose the heating and energy sources during the use phase of the issuers constructions. Although there are legislative measures in force in Finland to minimize the climate impact of these sources, it is possible that upon their divestment from projects, issuer-built buildings may lock-in fossil fuel energy sources. Furthermore, the framework has left unstated how the usage of fossil fuels in equipment will be mitigated or eliminated with respect to the construction of buildings and infrastructure.

Without stated targets for energy efficiency improvements, any efficiency gains are guided by certifications, which are not ambitious, and may lead to rebound effects. For example, investments in improving the energy efficiency of buildings or data centers may reduce the cost of operating these buildings which create incentives to expand buildings or the increase operations within these buildings which will detract from efficiency gains.

Environmental impact assessments, life cycle analyses and climate risk screenings are currently not standard practice across all projects. Moreover, the issuer's engagement with TCFD to this point has been limited. As the Finnish climate guide mentioned there will be probably increase river flows and floods in Finland, buildings and infrastructure could be increasingly exposed to physical climate risks in the future. The framework does not address methods to mitigate these potential pitfalls.

The issuer's reporting constitutes a pitfall. In its annual report, the issuer discloses that only emissions of waste and business flights are captured in its Scope 3 emission accounting. This current accounting ignores sourcing of its construction materials and end use of products. YIT has, however, set a target of halving the emissions of the materials of its self-developed projects by 2030 and enabling their carbon neutral heating & cooling (YIT climate goals 1 & 2). Furthermore, the issuer indicated that project-level data may be aggregated or may not be disclosed due to commercial sensitivities. This data could be disclosed in an anonymized way alongside clear methodologies of impact calculations; data that is, ideally, verified by an external party.



Appendix 1: Referenced Documents List

Document Number	Document Name	Description
1	YIT Green Finance Framework	Updated Green Finance Framework dated 11.03.2021
2	Annual report 2020	yit_vuosikatsaus_2020_eng.pdf (yitgroup.com)
3	YIT Code of Conduct	YIT Code of Conduct, English (yitgroup.com)
4	YIT GRI report 2020	yit_gri_2020_en.pdf (yitgroup.com)
5	YIT Sustainability Policy	Sustainability Policy (yitgroup.com)
6	YIT Environmental Principles	yit-corporation-environmental-principles-17.1.2019.pdf (yitgroup.com)
7	YIT Supplier Code of Conduct	yit-supplier-code-of-conduct-10-2020.pdf (yitgroup.com)



Appendix 2: About CICERO Shades of Green

CICERO Green is a subsidiary of the climate research institute CICERO. CICERO is Norway's foremost institute for interdisciplinary climate research. We deliver new insight that helps solve the climate challenge and strengthen international cooperation. CICERO has garnered attention for its work on the effects of manmade emissions on the climate and has played an active role in the UN's IPCC since 1995. CICERO staff provide quality control and methodological development for CICERO Green.

CICERO Green provides second opinions on institutions' frameworks and guidance for assessing and selecting eligible projects for green bond investments. CICERO Green is internationally recognized as a leading provider of independent reviews of green bonds, since the market's inception in 2008. CICERO Green 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 Green operates independently from the financial sector and other stakeholders to preserve the unbiased nature and high quality of second opinions.

We work with both international and domestic issuers, drawing on the global expertise of the Expert Network on Second Opinions (ENSO). Led by CICERO Green, ENSO contributes expertise to the second opinions, and is comprised of a network of trusted, independent 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).

