



# Volvo Group Green Finance Second Opinion

October 30, 2020

**Volvo Group is a multinational manufacturing group for trucks, buses, construction equipment as well as marine and industrial engines headquartered in Gothenburg, Sweden.** In 2019, Volvo Group delivered more than 232,000 trucks, 86,800 pieces of construction equipment, 9,700 buses, 18,100 marine engines and 21,300 industrial engines. Approximately 38% of Volvo Group's net sales occur in Europe, 30% in North America and 19% in Asia. While Volvo Group already offers zero tailpipe emission vehicles, the exact number of zero emission vehicles is currently not publicly disclosed

**Volvo Group excludes investments in fossil fuel equipment and exclusively dedicates investments to development and production and customer finance of fossil free solutions.** However, some zero emission solutions are not unique for zero emission vehicles and could also be deployed in hybrid vehicles. CICERO Shades of Green is encouraged by the company's efforts to drive innovation to unlocking hard-to-abate emissions. We recognize individual modes of zero emission transportation as Dark Green and part of a 2050 solution. While Volvo Group focuses on fossil free solutions, it cannot be excluded that electric solutions will be developed that will subsequently be used for transportation of fossil fuels or other fossil fuel intensive activities by Volvo Group's clients.

**The company has recently committed to develop targets in line with the Science Based Targets initiative (SBTi) and is focused on reducing use-phase emissions but currently does not systematically measure and disclose upstream and production emissions of all of its zero emission technologies.** While Volvo Group has not yet set an absolute Scope 1 or 2 emission target, the company has a 65% target for the share of renewable sources in the total energy consumption in 2025. While the company aims to reduce absolute Scope 3 emissions by 40Mt by 2020, the company currently does not disclose its estimated Scope 3 emissions. In addition, Volvo Group is currently not directly involved in expanding charging infrastructure which goes hand in hand with the deployment of electric solutions.

**Increased zero emission vehicle production can lead to increased pressure on material sourcing in the production of batteries and production emissions.** While Volvo Group shares some life cycle data on product level for trucks, we encourage Volvo Group to continued efforts and transparency on supply chain issues, especially regarding battery material sourcing and production emissions, as these account for a substantial share of life cycle emissions.

Based on an assessment of the framework's alignment with the Green Bond and Loan Principles, the project categories and Volvo Group's governance, Volvo Group's green finance framework receives the overall **CICERO Dark Green** shading and a governance score of **Excellent**. Volvo Group could improve by raising ambitions on Scope 3 accounting and TCFD alignment. In addition, Volvo Group could increase transparency, set requirements on suppliers' emissions and renewable energy use, expand efforts on life-cycle assessments and set respective targets.

## SHADES OF GREEN

Based on our review, we rate the Volvo Group's Green Finance Framework **CICERO Dark 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 Volvo Group's framework to be **Excellent**.



## GREEN BOND and GREEN LOAN PRINCIPLES

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





# Contents

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<b>1</b>	<b>Terms and methodology</b> .....	<b>3</b>
	Expressing concerns with 'shades of green' .....	3
<b>2</b>	<b>Brief description of Volvo Group's Green Finance Framework and related policies</b> .....	<b>4</b>
	Environmental Strategies and Policies .....	4
	Use of proceeds .....	5
	Selection .....	5
	Management of proceeds .....	5
	Reporting.....	6
<b>3</b>	<b>Assessment of Volvo Group's Green Finance Framework and policies</b> .....	<b>7</b>
	Overall shading .....	7
	Eligible projects under the Volvo Group's Green Finance Framework .....	7
	Background.....	8
	EU Taxonomy .....	8
	Governance Assessment.....	9
	Strengths.....	9
	Weaknesses.....	10
	Pitfalls.....	10
	<b>Appendix 1: Referenced Documents List</b> .....	<b>12</b>
	<b>Appendix 2: About CICERO Shades of Green</b> .....	<b>13</b>

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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 September 2020. 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.



**Brown** is allocated to projects and solutions that are in opposition to the long-term vision of a low carbon and climate resilient future.

### 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



New infrastructure for coal

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 Volvo Group's Green Finance Framework and related policies

Volvo Group is a multinational manufacturing group for trucks, buses, construction equipment as well as marine and industrial engines headquartered in Gothenburg, Sweden. The company has 100,000 employees, production facilities in 18 countries and sells its products in more than 190 markets. Major production facilities are located in Sweden as well as in the US, Brazil, India, France, Japan and China. In 2019, Volvo Group delivered more than 232,000 trucks, 86,800 pieces of construction equipment, 9,700 buses, 18,100 marine engines and 21,300 industrial engines. The Group's five largest markets are the US, France, United Kingdom, Japan and Germany – approximately 38% of Volvo Group's net sales occur in Europe, 30% in North America and 19% in Asia.

### Environmental Strategies and Policies

Volvo Group has issued sustainability reports since the 1990s, is committed to the Paris Climate Agreement and the company believes that transport can be fossil free by 2050. The issuer monitors and reports its emissions in its annual and sustainability reports, reports according to GRI core option and partly includes Scope 3 emissions. In addition, the issuer has recently committed to develop targets in line with the Science Based Targets initiative (SBTi). The Group has adopted the GRI framework in 2000 and the reported emissions and energy use are subject to third party assurance. While Volvo Group already offers zero emission vehicles, the exact number of zero emission vehicles is currently not publicly disclosed.

Total Scope 1 and 2 emissions amounted to 324ktCO<sub>2</sub> in 2019. This constitutes a reduction of 23% compared to 2018 mainly due electricity consumption and a reduction of 21% compared to 2015. Approximately a third of Volvo Group's direct emissions result from natural gas followed by electricity, diesel, other sources and district heating. Volvo Group aims to reduce energy by 150GWh from 2015 to 2020, which was already achieved by implementing over 1000 energy efficiency projects leading to a reduction of 170GWh which corresponds to a reduction of 8%. Currently, 48% of Volvo Group's total energy consumption is from renewable sources and the group has a 65% renewable energy target for 2025.

According to Volvo Group, approximately 95% of the life cycle emissions from trucks or machines with traditional diesel engine occur in the use phase (Scope 3). Volvo is conducting life cycle assessments on an as-needed basis since the early 1990s and is currently maintaining a life cycle database for Volvo trucks on its website. Volvo Group does not report annual Scope 3 emissions through use of sold products, but the annual reduction (34 MtCO<sub>2</sub>e within 2015-2019). Volvo Group has the target to save 40 million tCO<sub>2</sub>e in the use phase between 2015 and 2020. According to the company, Volvo Group is on track to achieve this target and is currently evaluating new targets going forward. Volvo Group aims at 35% share of electric vehicles sales by 2030 and a first hydrogen powered heavy-duty truck by the second half of the 2020s. Volvo Group's scenario analysis shows that sustainable biofuels also will be critical to achieve fossil free transports by 2050. In addition, Volvo Group has a target to reduce freight emissions per produced unit by 30% by 2025 compared to 2018.

Approximately 95% of production facilities and 90% of distribution centers are certified according to ISO 14001 Environmental management system. Volvo Group has set a target to transform 55 sites to landfill free by 2025. In addition, Volvo Group targets to increase remanufacturing business by 60% the next five years, which includes remanufacturing of parts and components, such as engines and gearboxes and other key components. 51,000 Tier 1 suppliers deliver products and services to the Volvo Group and are required to monitor and track



its emissions according to Volvo Group's Supplier Code of Conduct. However, Volvo Group does not collect supplier emissions for all its suppliers

The Volvo Group is a signatory of the UN Global Compact. The company is also a current member of the Climate Savers program by the WWF, the Global Battery Alliance, and Responsible Minerals Initiative. Volvo Group has identified some climate risks, supports the Task Force on Climate-Related Financial Disclosures (TCFD) and will continue to adopt its recommendations according to the issuer.

### Use of proceeds

Proceeds raised from green financing can be used to finance and/or refinance projects within the clean transportation category. The issuer expects the majority of proceeds to go to financing new projects. The use of proceeds includes production, research and development as well as customer finance in the area of zero direct emission vehicles, machines and engines such as battery electric and fuel cell vehicles. Refinancing is defined as the financing of eligible assets that have been taken into operation more than one year, but less than two years before the time of approval by the Green Finance Committee.

Volvo Group excludes from financing any investments in products that run on fossil fuels, incl. hybrid vehicles and engines. However, some zero emission solutions are not unique for zero emission vehicles and could also be deployed in hybrid vehicles.

### 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 funding. The broader the project categories, the more importance CICERO Green places on the governance process.

Volvo Group has established a Green Finance Committee to evaluate and select assets that are in line with its framework. The Green Finance Committee consists of representative from Group Finance, Group Trucks Technology, Corporate Responsibility, Corporate Legal (Environmental Department) and the Group's Environmental Director and decides in consensus. According to the company, Corporate Legal (Environmental Department) has climate expertise and proposals to the Green Finance Committee will be prepared by various experts. Green Finance Committee is responsible for the ongoing monitoring of the Green Asset Portfolio, for replacing investments that no longer meet the eligibility criteria and for reviewing and updating the portfolio of assets on a quarterly basis. The assessment could be based on life cycle assessments or by using other tools to find potential trade-offs. The selection process also includes a review of eligibility according to the EU taxonomy according to the company. Controversial projects may be excluded according to the EU taxonomy's Do-No-Significant-Harm (DNSH) criteria.

All green consumer finance loans are tagged electronically in Volvo Group's internal systems. The Green Finance Committee approves and keeps records of all models that are eligible for such loans

### Management of proceeds

CICERO Green finds the management of proceeds of Volvo Group to be in accordance with the Green Bond and Loan Principles. An amount equal to the net proceeds of any Green Financing raised will be credited to an earmarked register and tracked in a separate order to support Volvo Group's financing of the Green Asset Portfolio. Each project will be disbursed and allocated individually but kept track on a portfolio basis. The Group Treasury is responsible for the allocation of proceeds. If, for any reason, an Eligible Asset ceases to



comply with the requirements set out in Volvo's Green Finance Framework, the asset will be removed from the Green Asset Portfolio.

Unallocated proceeds will be held at Volvo Group Treasury in cash. According to the company, Volvo Group's finance policy does not allow for investments in marketable securities.

## 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.

Volvo Group will annually publish reporting on its portfolio. The information may be provided on an aggregated portfolio basis due to confidentiality agreements, competitiveness consideration, or numerous projects limiting the amount of detail that can be made available. According to the company, this is not provided as anonymized project-by-project reporting due to practical reasons due to, e.g., tracking portfolio systems.

The allocation reporting will include the balance of unallocated amounts, the split between new financing and re-financing as well as distribution of eligible assets categories financed and geographical distribution of eligible assets on country level. The allocation reporting will also include a list of projects financed with a brief description of the projects, allocated and disbursed amounts and expected impacts.

Volvo Group aims to provide, where feasible and subject to data availability and competitiveness considerations, reporting on the expected or actual environmental outputs and/or impact of the portfolio. In addition, Volvo Group informed us that the impact reporting will be externally reviewed. The following impact indicators are considered:

- Number of loans to zero direct emission vehicles
- Number of zero direct emission vehicles produced
- Revenues from zero direct emission vehicles
- Estimated reduced CO<sub>2</sub> emissions from customer use phase



### 3 Assessment of Volvo Group’s Green Finance Framework and policies

The framework and procedures for Volvo Group’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 Volvo Group 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 Volvo Group’s Green Finance Framework, we rate the framework **CICERO Dark Green**.

#### Eligible projects under the Volvo Group’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
Clean Transportation	<p>Clean transportation includes the development, production and promotion of zero direct emissions vehicles, machines and engines such as:</p> <ul style="list-style-type: none"> <li>• Vehicles, machines and engines with zero tailpipe emissions such as battery electric vehicles (BEV).</li> <li>• Vehicles, machines and engines with zero tailpipe emissions such as fuel cell electric vehicles (FCEV).</li> </ul> <p>Investments in clean transportation fall into three categories:</p> <ul style="list-style-type: none"> <li>• Research and Development</li> <li>• Capital and operating expenditure for the R&amp;D and design.</li> </ul>	<p><b>Medium to Dark Green</b></p> <ul style="list-style-type: none"> <li>✓ Zero emission busses, trucks and other zero emission transport solutions are part of a 2050 solution.</li> <li>✓ According to Volvo Group, this category is dedicated to development and production of zero emission solutions globally, but some zero emission solutions are not unique for zero emission vehicles and could also be deployed in hybrid vehicles.</li> <li>✓ Volvo Group informed us that fossil fuel-based equipment, fossil fuel heating, mining activities and new buildings are excluded. However, according to Volvo Group, the production does not exclusively use renewable energy leading to potentially increased emissions through production processes.</li> <li>✓ R&amp;D expenditures can include operational costs as well as capital expenditure.</li> <li>✓ For the time being electric vehicles are expected</li> </ul>



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| <ul style="list-style-type: none"><li>• Production Capital expenditures for the sourcing, tooling, testing concepts and facilities, manufacturing, production processes and production facilities.</li><li>• Customer Finance Customer Customer finance for zero exhaust emission electric and fuel cell vehicles, machines and engines.</li></ul> | <ul style="list-style-type: none"><li>✓ Zero emission trucks, machinery and engines will not be dedicated to fossil fuel transport and fossil fuel related mining, but Volvo Group cannot exclude end-use of its products as these are sold through dealerships.</li><li>✓ The production of batteries and sourcing of raw materials can have substantial climate and environmental impact. Volvo Group is aware of these risks and focuses on strategic partnerships to address this.</li><li>✓ Volvo Group does not perform additional screenings regarding energy efficiency or climate resiliency.</li></ul> |
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Table 1. Eligible project categories

### Background

According to the international Energy Agency (IEA) technology and policy can steer transport towards increased sustainability. Electrification emerges as the major low-carbon pathway for the transportation sector. This trend is already partly underway, with the electric car stock projected to increase 28 times by 2030 from today's two million vehicles. Fast tracking electro-mobility will require major technological developments and infrastructure investments based on strong policy support. Policies and technologies that reduce the need for individual transportation — such as better urban planning or increased use of collective transportation — can make deployment of new technologies more manageable and significantly reduce the required investment. Aviation, shipping and heavy-duty road are the most difficult modes to decarbonize.

In order to assess the environmental impacts of the electric trucks, busses and machinery the emission factor for the electricity grid should be considered. While electric modes of transportation are preferable both when it comes to reducing carbon emissions and local pollution to those that directly use fossil fuels, we should nevertheless be aware of the indirect GHG emissions stemming from the production and use of trucks, buses and engines and strive to keep increasing their efficiency.<sup>1</sup>

### EU Taxonomy

In 2020 the final reports to the European Commission on the EU Taxonomy and Green Bond Standard were published in a multi stakeholder effort moving to standardize thresholds and metrics to aid the green transition. This also includes social guidelines (not released yet) and “Do-No-Significant-Harm” criteria of the green transition activities. The Taxonomy provides signposting for investors and bond issuers to aid in their decision-making and project selection processes

According to the issuer this framework is developed to be closely aligned with EU taxonomy and activities are aligned with the EU's environmental objective of climate change mitigation and focuses on “Manufacturing of low carbon technologies”. Volvo Group's Green Financing Committee consider aspects such as human and labor

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<sup>1</sup> <https://www.sciencedirect.com/science/article/pii/S030626192030533X>



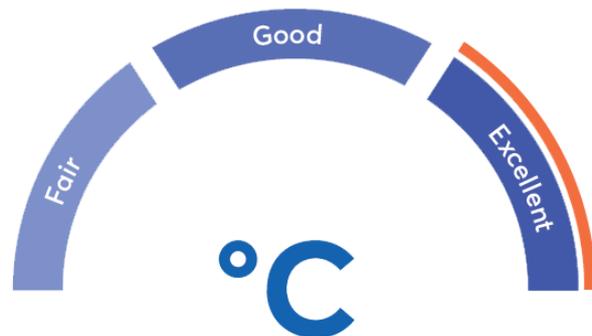
rights as well as avoiding significant harm to the environmental objectives defined in the EU Taxonomy to the extent possible.

Volvo Group's investments in zero emission vehicles, machines and engines would likely qualify under the EU taxonomy.

### Governance Assessment

Four aspects are studied when assessing the Volvo Group'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.

Volvo Group has a strong track record with regards to sustainability and has issued sustainability reports since 1990. While Volvo Group does not yet have absolute emission reduction targets for Scope 1 and 2 emissions and does not yet disclose Scope 3 emissions for the use phase of its products, the company has other relevant targets in place such as a renewable energy target of 65% by 2025. In addition, the issuer has recently committed to develop targets in line with the Science Based Targets initiative (SBTi), but has not set firm targets yet. Volvo Group has conducted a 2050 scenario analysis on transition risks and has identified electrification as a key enabler with bio-based fuels and fuel-efficiency playing an additional important role in the transition. Volvo Group has identified some climate risks, supports the Task Force on Climate-Related Financial Disclosures (TCFD) and will continue to adopt its recommendations according to the issuer. While the company assesses projects according to potential trade-offs and selects projects in consensus, life cycle assessments of new projects (e.g., new products) are not required. However, Volvo Group is conducting life cycle assessments on an as-needed basis since the early 1990s and is currently maintaining a life cycle database for Volvo trucks on its website. Volvo Group does not report on an aggregated level due to competitive and practical reasons, does not commit to disclosure of life cycle emissions or production emissions of low-carbon vehicles. However, Volvo Group informed us the company will receive an external review for its impact reporting. The overall assessment of Volvo Group's governance structure and processes gives it a rating of **Excellent**. However, Volvo Group has several areas where improvements in governance could be made.



### Strengths

It is a strength that Volvo Group focuses its framework exclusively on the development and production of fossil free transport solutions. Zero emission busses, trucks and zero emission equipment solutions are part of a 2050 solution. This is underscored by the fact that Volvo Group excludes from financing any fossil fuel equipment for production of zero emission solutions.

It is a strength that Volvo Group targets to increase remanufacturing business by 60% within the next five years. Increased recycling and redeployment of technology is a key element of a circular economy approach.



It constitutes a strength that Volvo Group has conducted a 2050 scenario analysis on transition risks and has identified electrification as a key enabler with bio-based fuels and fuel-efficiency playing an additional important role in the transition.

### Weaknesses

We find no material weaknesses in Volvo Group's framework.

### Pitfalls

CICERO Shades of Green recognizes individual modes of zero emission transportation as Dark Green and part of a 2050 solution. However, CICERO Green encourages considering environmental impacts compared to other ways of environmentally efficient transportation such as low carbon rail and water transportation.

While Volvo Group has recently committed to develop targets in line with the Science Based Targets initiative (SBTi), it constitutes a pitfall that Volvo Group does not yet have absolute emission reduction targets for the group (Scope 1 and 2) and does not yet disclose any information on its Scope 3 emissions through the use-phase of its products. While Volvo Group has set an absolute reduction target for Scope 3 emissions and obtains an external review for its achievements the actual ambition of this target remains unclear. According to the company this is mainly due to a lack of harmonized reporting methodologies posing a risk for skewed comparisons.

It is a pitfall that substantial increase in electric truck production could lead to increased pressure on rare earth material sourcing and other environmental impacts that might occur especially in regions with environmental regulation that is less strict than in the EU. In addition, Volvo Group has production activities in regions with high grid emission factors. Volvo Group is aware of these challenges and is taking active measures to address these issues, e.g., establishing partnerships to secure sustainable production of batteries. According to the company, these are currently partly produced in countries with energy intensive grids and shipped to global production plants. According to the company, Volvo Group intends to adopt its strategy on sustainable batteries as the market is developing. CICERO Shades of Green encourages Volvo Group to increased efforts improving supply chains and transparently report on key issues Volvo Group encounters in order to support a global approach toward avoidance of negative environmental and social impacts of material sourcing.

While Volvo Group has committed to report on emissions reductions from customer use phase on an aggregated level, CICERO Green sees a potential pitfall in Volvo Group's transparency. Volvo Group is encouraged to report on number and type of vehicles produced as well as to further explore possibilities to measure and disclose the up-stream and down-stream emissions from its products, incl., e.g., the aforementioned battery sourcing. Volvo Group is already conducting life cycle assessments on an as-needed basis and is disclosing life cycle impacts on a product level for selected trucks on Volvo Group's website. However, Volvo Group does not yet assess and disclose upstream emissions for all zero-emission vehicle production, does not track suppliers' emissions and has no binding selection criteria regarding suppliers' emissions profile or their renewable energy use. While zero emission vehicles are part of a 2050 solution, Volvo Group is encouraged continued efforts on cycle assessments and to make the methodologies used available for all new products financed under this framework.

While Volvo Group is indirectly involved in the deployment of charging infrastructure through influencing policy, it constitutes a pitfall that Volvo Group is currently not directly involved in expanding charging infrastructure as this goes hand in hand with the deployment of electric vehicles. Similarly, Volvo Group is not directly involved in the production and distribution of hydrogen or biofuels.



Volvo Group currently does not map or disclose its customers. Since Volvo Group sells through dealers in many cases the information on final application of products is not available. This can materialize as a pitfall as zero emission trucks, engines and machinery could eventually be deployed for fossil fuel transport, fossil fuel mining and production or other unsustainable applications. Volvo Group informed us that fossil fuel customers are expected to represent a very small share of end users.

Volvo Group has conducted limited climate scenario analysis on physical risks and more detailed related to the transition opportunities and risks. The Volvo Group is a supporter of the TCFD and is in the process of aligning with its reporting recommendations. It is a pitfall that the Volvo Group has not progressed further in this process.



# Appendix 1: Referenced Documents List

Document Number	Document Name	Description
1	Volvo Group's Green Finance Framework, September 2020	
2	Volvo Group's Annual and Sustainability Report 2019	
3	Volvo Group's GRI report 2019	
4	Volvo Group's Code of Conduct	
5	Volvo Group's Supplier Code of Conduct	
6	Volvo Group's Environmental Policy	
7	Press release: Green Bonds and SBTi	



## 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).

