



# Fintoil Hamina Oy

## Green Finance Second Opinion

June 8<sup>th</sup>, 2021

**Fintoil is a Finnish company established in 2017 that refines certified crude tall oil (CTO) for 2<sup>nd</sup> generation biofuels production and for the chemicals, food and pharmaceuticals industries.** By using CTO raw material, considered as residues and wastes, Fintoil is contributing to the circular economy.

**Financing under this framework will be solely used for the construction and operation of a biorefinery in South-Eastern Finland with its operation starting in 2022.** Two thirds of the production will be geared towards biofuels, and the remaining third towards other biobased products. According to the issuer, Fintoil's biobased alternatives to fossil fuel can reduce greenhouse gas (GHG) emissions up to 90 % in the total value chain, compared to similar fossil fuels-based products. The biorefinery will have a feed capacity of 200,000 tons of 100% ISCC certified CTO. ISCC includes reduction of GHG-emissions, sustainable land use, protection of natural biospheres, and social sustainability.

**Investors should be aware that Fintoil is powering a large share of the production process (boiler) using natural gas.** However, the boiler reliant on natural gas is not included under the framework, only rented by the company and can be replaced by another boiler not requiring the use of fossil fuel when feasible. Fintoil aims at having a carbon free production process by 2027, when the technology become available. However, the carbon free production target is related to the process only, and 25% of the CTO feedstock is expected to be sourced outside Northern European countries (North America), which can potentially negatively impact the final emission reductions along the value chain. The issuer informed us that carbon offsets are not considered.

**Fintoil could improve its governance procedures.** Fintoil has estimated the emissions for scope 1 and 2, but not for scope 3. The company is not yet assessing climate risks in line with the TCFD recommendations. The allocation and impacts will be externally reviewed and will be publicly available on the company website. However, the project categories do not include specific KPIs, and the company does not have systematic approaches to exclude potentially controversial projects. Also, the company is not screening for suppliers with high emissions activities, nor require from them to consider the climate impact of their operations.

Based on the overall assessment of the project that will be financed under this framework, and governance and transparency considerations, Fintoil's Green Finance Framework receives a **CICERO Medium Green** shading and a governance score of **Good**. The framework and the governance would benefit from having specific supply chain requirements and approaches to exclude controversial projects. In addition, Fintoil could systematically address climate risks, in line with the TCFD recommendations, and use climate scenarios analysis.

### SHADES OF GREEN

Based on our review, we rate the Fintoil Hamina Oy's green finance framework **CICERO Medium 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 Fintoil Hamina Oy's framework to be **Good**.



### GREEN BOND 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 **June 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 bond 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 Fintoil Hamina Oy's green finance framework and related policies

Established in Finland in 2017, Fintoil refines certified crude tall oil (CTO) for 2<sup>nd</sup> generation biofuels<sup>1</sup> production, and for the chemicals, food, and pharmaceuticals industries. Fintoil's key employees and founders have decades of commercial and investment experience from the CTO industry and have industry experience from the procurement and refining of CTO as well as greenfield investment and operation experience of a CTO refinery established in Rauma in 2002.

With the construction of the biorefinery in the Hamina oil port in South-Eastern Finland in 2021, Fintoil has chosen to establish a Green Financing Framework. The issuer informed us that they have started the construction, and that they estimate starting the operation in the summer of 2022. Once operational, the issuer informed us that the biorefinery will have a feed capacity of 200.000 tons of crude tall oil (CTO), which derivates from, e.g., Crude Fatty Acid (CFA) and Tall Oil Rosin (TOR). The production process of the refinery is based on fractional distillation in which heat energy and negative pressure are used to distil the raw materials (crude tall oil) to its constituents, separating the wanted fractions. Fintoil refines raw materials for biofuels, adhesives and binders, car tires, inks, health, and wellness products as well as for the aromatic chemical industry. The company can reduce the GHG emissions up to 90 % in the total value chain, compared to similar fossil fuels-based products, according to the issuer. The company further informed us that the commissioning of the plant requires a Commissioning Permit from the environmental authority (TUKES, Finnish Safety and Chemicals Agency). The plant will operate under an Environmental Permit issued by AVI (Regional State Administrative Agencies) and compliance with the permit conditions will be monitored by ELY (Centre for Economic Development, Transport and the Environment). According to the issuer, the permit will be applied and granted only when the facility is ready for operation, which includes regulations related to pollution observation, prevention and control.

### Environmental Strategies and Policies

Fintoil aims to have a carbon free production process by 2027, by replacing natural gas in the production process by green energy, and thus reaching the Finnish government's carbon neutrality targets when production starts in the summer of 2022. However, the carbon free production target is related to the process only, and not to other elements along the supply chain, such as the transport. The issuer also informed us that carbon offsets are not considered. Furthermore, Fintoil aims to reduce its customers' greenhouse gas emissions by at least 220 000 tons CO<sub>2</sub> annually via its Crude Fatty Acid (CFA) production alone. The total annual CO<sub>2</sub> emissions for scope 1 and scope 2 for the projected production of 200,000 tons of CTO would represent 20,395.2t CO<sub>2</sub>eq/year. 60% of these CO<sub>2</sub> emissions will be associated with the use of natural gas in Fintoil's production process, where most of the emissions will be related to the heating of the boilers in the distillation process. The remaining 40% will come from transport emissions (mostly cargo by road and ship, according to the issuer). However, the company is not monitoring nor reporting on scope 3 emissions yet, and according to the issuer, the necessity to monitor and report the scope 3 emissions will be decided as part of Fintoil's ESG policy which will be completed by the start of the operations.

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<sup>1</sup> [From 1st- to 2nd-Generation Biofuel Technologies – Analysis - IEA](#)



From the total energy used in the production process, the issuer informed us that 83% will be attributed to the boiler used in the distillation process. This boiler uses natural gas and can enable emissions reduction up to 30% compared to traditional CTO refineries using heavy fuel oil, according to the issuer. Other options were considered by the company for the distillation process, such as electricity. However, the issuer mentioned that the technologies based on the use of electricity in the distillation process are not yet technologically feasible. Fintoil is also evaluating biogas as a potential source of process energy to replace natural gas, as its availability and economic feasibility improves. The remaining 17% of the total energy used in the production process (i.e., for equipment like pumps and electric heat tracing) are powered by wind power electricity, and Fintoil estimates that it will use wind power electricity up to 9900 MWh annually. The issuer informs that the CO<sub>2</sub> emission can be reduced by around 90% / 1200 tons annually by using electricity generated from wind power, compared to using the general electricity mix available in Finland. To heat the storage CTO tanks, Fintoil further informed us that it will use excess process energy. In the optimization of its process emissions, the issuer mentioned using Neste Engineering Solutions's (NES) Nextpinus technology, which according to NES, consumes 57% less process energy per output ton than traditional technology.

Regarding its supply chain, the company aims at sourcing up to 75% of its CTO feedstock from Finland, Sweden, and other northern European countries (i.e., Germany, Poland, Estonia, and Northern part of Russia, according to the issuer). The remaining 25% of CTO feedstock is expected to be sourced from North America. The company further informed us that Fintoil is committed to only use International Sustainability and Carbon Certification (ISCC) certified raw material, which requires that the origin of the wood selected is from certified forest, such as according to the Forest Stewardship Council (FSC), or according to the Programme for the Endorsement of Forest Certification (PEFC). The ISCC certification is a sustainability certification system applicable to all biomass and helps organizations to demonstrate responsibility towards reduction of greenhouse house gases emissions (GHG), sustainable land use, protection of natural biospheres, and increase of social sustainability. As Fintoil's products are expected to be ISCC certified, the company mentioned that it also requires the CTO suppliers to be ISCC compliant. The company confirms that its raw material fulfils the criteria of the European Renewable Energy Directive (RED II) in its core market European Union, as crude tall oil is regarded as residual, and is on the list of approved feedstocks for Advanced Biofuels RED II. The company further confirmed that its close relation with its supply chain and producers ensures the traceability and original location of its raw material, as well as the certification of the supply chain under FSC and/or PEFC. However, the issuer is not screening for intensive fossil fuel suppliers, e.g., from the pulp and paper sector, and does not have more specific requirements for suppliers to consider the climate impact of their operations, only assumes that they are compliant with the local regulations where they operate.

Regarding its customers, the company estimates that of the CTO produced roughly, 60% is expected to be distributed to biofuels and 20% to other industries, such as chemical industry, coating industry, cardboard industry, tire industry, fragrance makers, and pulp industry. The remaining 20% is expected to be distributed to sterols, a plant-based edible oil used in the food industry. The company informed us that the renewable hydrotreated vegetable oil (HVO) diesel producers are the direct clients for renewable fuels, which will mostly be use in road transport. The issuer mentioned not excluding any clients, as all its products replace hydrocarbons.

Fintoil mentioned that it has not yet decided on the specific reporting standards to use, in addition to local GAAP. The company will decide on the possible additional reporting standards as part of its ESG policy, which will be completed by the start of the operations. As part of this process, Fintoil will assess the TCFD's suitability for Fintoil. At the moment, the company has not yet carried out climate risk assessments, in line with the TCFD recommendations, nor use climate scenarios analysis.



### Use of proceeds

The amount equal to the net proceeds of the Green Debt issued by Fintoil will be used to finance eligible assets and projects that have been evaluated and selected by Fintoil in accordance with this Green Finance Framework.

Expected investments under this framework will fall under the category of Eco-efficient and/or circular economy adapted products, production technologies and processes. The issuer informed us that the net proceeds will be attributed to new financing only, as the issuer confirmed that 100% of the green finance issuance will be attributed to the construction, the operation and the maintenance of the new biorefinery in the Hamina oil port in South-Eastern Finland. Once the investment has been completed, the company will then be the world's 4th largest CTO refiner. The Fintoil site in the Hamina oil port will cover over 50,000 square meters, and CTO storage tanks are located in the immediate vicinity of its refinery at the Hamina oil port. The port has a huge container terminal and is specialized in the handling and storage of liquids. Two thirds of the production will be geared towards renewable fuels and the remaining third towards other products, such as aromachemicals, fragrances, paper board sizing agents, tackifiers, and cholesterol lowering products for food and pharmaceutical industry.

Green Debt will not be used to (re-)finance investments that utilise fossil-based raw materials or that are associated with environmentally negative resource extraction. The issuer confirmed that the refinery will only use crude tall oil (CTO) as raw material, which does not involve fossil fuel-based material.

### 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.

Fintoil has designed and implemented a process to ensure that only projects aligned with the criteria mentioned in the table will be selected as eligible assets and projects for its Green Debt issuance. A Green Finance Committee ("GFC") has been established with the CEO, CFO, and environmental, health, quality, and safety (EHQS) manager. The issuer informed that the committee members have relevant experience in CTO in supply chain management, financial management and environmental, health, quality, and safety matters. The GFC will meet at least on an annual basis.

On controversial projects, the issuer informed us that only one project is currently selected, however selection criteria in the future will be based on the members professional expertise, the green finance framework in place, and the company's ESG policy.

The Green Finance Committee follows the below process when selecting and evaluating projects for the eligible assets and projects.

1. Fintoil evaluates eligibility of proposals according to the eligibility criteria specified in the table and removes assets and projects that do not meet the criteria.
2. Fintoil's Treasury verifies eligibility and presents the potential green assets and projects to the Green Finance Committee for final approval.

The issuer informed us that decisions are based on consensus, however the final investment decisions are always made by the board of directors, in accordance with the Finnish Companies Act.

### Management of proceeds

CICERO Green finds the management of proceeds of Fintoil to be in accordance with the Green Bond Principles.



Fintoil mentioned that the proceeds will be allocated to individual disbursements. Fintoil will establish a Green Debt Register in relation to Green Debt issued by Fintoil for the purpose of monitoring the eligible assets and projects and the allocation of the net proceeds from Green Debt to eligible assets and projects. Fintoil will over the duration of the outstanding Green Debt build up and maintain an aggregate amount of asset and projects in the Green Debt Register that is at least equal to the aggregate net proceeds of all outstanding Fintoil Green Debt.

There may be periods when the total outstanding net proceeds of Green Debt exceed the value of the eligible assets and projects in the Green Debt Register. Any such portion will be held in accordance with Fintoil's normal liquidity management policy. The issuer further confirmed that the portfolio balance of unallocated proceeds will be reported, and that the unallocated proceeds cannot be invested in fossil-fuel related/controversial industries.

The Green Debt Register will form the basis for the impact and allocation reporting.

## 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.

Fintoil, under the responsibility of the CFO, will annually create a report on the allocation and impact of green debts issued under this Green Finance Framework. Where relevant, Fintoil will seek to align the reporting with the latest standards and practices as identified by ICMA and the guidelines in the Nordic Public Sector Issuer's Position Paper on Green Bond Impact Reporting. The impact report will, to the extent feasible, also include a section on methodology, baselines and assumptions used in impact calculations.

The allocation report will, to the extent feasible, include the following components: A list of all eligible assets and projects funded including amounts allocated, descriptions of selected eligible assets and projects financed, amounts invested in each category as defined in the use of proceeds section, and the relative share of new financing.

Fintoil will report on the actual environmental impact of the investments financed by their Green Bonds. If/when actual impact for some reason is not observable, or unreasonably difficult to source, estimated impact will be reported. The impact indicators may vary with investment categories, as defined in the Green Finance Framework. The impact metrics selected may include the following: Eco-efficient and circular economy adapted products, Annual CO<sub>2</sub> emissions avoided due to the investment in the Hamina Refinery, and amount of fossil-based raw materials avoided/replaced.

Fintoil will make the report on the impact and allocation of other Green Debt Instruments publicly available on Fintoil's website. Fintoil aims at clarifying, and specifically outlining, if an eligible asset or project has been financed by several Green Debt Instruments. The reports will be subject to statutory annual audit of governance by Fintoil's external auditors.



### 3 Assessment of Fintoil Hamina Oy’s green bond framework and policies


The framework and procedures for Fintoil’s green finance 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 Fintoil 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 Fintoil’s green bond framework, we rate the framework **CICERO Medium Green**.

#### Eligible projects under the Fintoil Hamina Oy’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
<b>Eco-efficient and/or circular economy adapted products, production technologie</b>  	<ul style="list-style-type: none"> <li>Development, operations, maintenance, and expansion of renewable and circular solutions to reduce greenhouse gas emissions. The environmental objectives targeted with proceeds allocated relate to the reduction of the carbon emissions by the expansion and development of Fintoil’s sustainable product line which provide an alternative to fossil fuels and products.</li> <li><u>Investments in Renewable and Circular solutions</u> include product refineries for the production of CTO and derivatives within which may be further processed as raw materials for the 2nd generation biofuel production and the chemicals, food and pharmaceuticals industries.</li> </ul>	<b>Medium Green</b> <ul style="list-style-type: none"> <li>The green bond issuance will only be attributed to the financing of the construction and operation of the biorefinery in the Hamina oil port in South-Eastern Finland.</li> <li>By producing 2<sup>nd</sup> generation biofuels from residual and waste products and other products from CTO raw material, Fintoil is contributing to the circular economy.</li> <li>Biofuels are limited to second generation or higher advanced biofuels. These have a lower climate impact as they reduce the risk of indirect land use change. Biofuels are important to help the EU meet its GHG-reduction target.</li> <li>The eligible biorefinery facility is powered with a large share of natural gas. Investors should therefore be aware that the biorefinery process is associated with potentially high level of emissions. However, the boiler is not included under the framework, is only rented by the company, and can be replaced by another boiler not requiring the use of fossil fuel when feasible, according to the issuer. The</li> </ul>





- remaining equipment used in the process, i.e., pumps and electric heat tracing, are powered by wind power electricity, according to the issuer.
- Fintoil aims to have carbon free production process by 2027, by replacing natural gas in the production process by green energy, when the technology become available. The issuer informed us that carbon offsets are not considered.
  - The company is not screening for suppliers with high emissions activities, nor require from them to consider the climate impact of their operations.
  - The issuer confirms that the CTO sourced needs to be 100% ISCC (International Sustainability and Carbon Certification) certified. The ISCC helps organizations to demonstrate responsibility towards reduction of greenhouse house gases emissions (GHG), sustainable land use, protection of natural biospheres, and increase of social sustainability<sup>2</sup>.
  - 75% of the CTO feedstock is expected to come from northern European countries, however, the remaining 25% is expected to be sourced from North America, thus associated with transport related emissions.
  - The EU Taxonomy establishes criteria for the activity “Manufacture of biogas and biofuels for use in transport mitigation”. The threshold for greenhouse gas emission savings from the manufacture of biofuels and biogas for use in transport are at least 65 % for new plants in relation to the GHG saving methodology and the relative fossil fuel comparator.
  - The company mentioned that its products can reach up to 90% of GHG emissions savings, compared to similar fossil fuels biorefineries. However, due to transport and process related emissions, the emissions reduction in the total value chain can be negatively impacted.
  - Fintoil has specified that forestry activities will not contribute to deforestation, as Fintoil is committed to only use International Sustainability and Carbon Certification (ISCC) certified raw material, which requires that the origin of the wood selected is from certified forest, such as according to the Forest Stewardship Council (FSC), or according to the Programme for the Endorsement of Forest Certification (PEFC).
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<sup>2</sup> [Solutions for sustainable and deforestation free supply chains > ISCC System \(iscc-system.org\)](https://www.iscc-system.org/)



- A recent Finnish climate guide has pointed out that increased rainfall, and snowfall being replaced by rainfall in winter, will probably increase river flows and floods in Finland. Therefore, we encourage the issuer to carry out climate risks assessments using climate scenarios analysis.

Table 1. Eligible project categories

## Background

Tall oil is an important by-product of kraft pulping processes. Tall oil is produced mainly from fatty and rosin acid extractives and is usually recovered from the recovery cycle of the kraft pulping process to benefit the pulping process. Tall oil is one of the current commercially viable by-products of the kraft pulping process. The commercialization of tall oil has grown to 1.6 million metric tons per year globally in 2006, and currently, the United States, Scandinavian countries, Russia, and China are the leading producers of tall oil. Growth is expected to increase towards 2 million metric tons per year by 2018. Tall oil could also be converted to fuel at a much lower cost than other alternative biomaterials, such as vegetable oil<sup>3</sup>.

Biofuels from tall oil has a significant greenhouse gas (GHG) mitigation potential if the resources are developed sustainably. Current systems can deliver 80 to 90% emission reductions compared to the fossil energy baseline<sup>4</sup>. According to the revised Renewable Energy Directive (RED II), biofuels must achieve greenhouse gas savings of at least 50% for plants starting operation before 2015 and 65% for plants starting after 2021, in comparison to fossil fuels, to be considered sustainable for new production plants. The RED II also lays out targets for biofuel inclusions in the transport sector, such as a 14 % inclusion of biofuel in the transport sector by 2030. Biofuels are important to help the EU meet its GHG-reduction targets<sup>5</sup>.

Finland is a global leader in producing second-generation biofuels from wood and by-products, notably bio.<sup>6</sup> This includes both bioenergy for electricity, as well as biofuels for e.g., the transport and heating sectors. Second generation biofuels also represent an advantage as they are produced from residual and waste products from, for example, industry and households, compared to first-generation biofuels which are produced directly from crops from the fields, such as cereals, maize, sugar beet and cane, and rapeseed. Second generation biofuels non only contribute to the circular economy and to emissions reduction, but are also biodegradable, non-toxic and emit fewer particles than fossils fuels<sup>7</sup>. Bioenergy has been labelled as “carbon neutral”, the idea being that the CO<sub>2</sub> emitted at combustion is compensated by the CO<sub>2</sub> absorbed during the growth period of a tree. However, CO<sub>2</sub> concentrations in the atmosphere will be temporary higher after a tree is burned/combusted<sup>8</sup>. Further, the climate benefits of biofuels also depend on the alternative source of energy in the system, e.g., share of electric vehicles or low-emission vehicles already in use. There is a need for research and innovation in a bio-based economy to reduce our dependency on fossil fuels for everyday materials and fuel.<sup>9</sup> Additionally, biorefineries can ensure that biofuels follow a cascade utilization by separating the fuel into fractions whereby the valuable molecules are processed into high-value applications such as chemicals and materials, while the lower quality fractions are used for fuels and energy recovery.

<sup>3</sup> [AroT2017m-1a.pdf \(lakeheadu.ca\)](#)

<sup>4</sup> <https://www.ipcc.ch/site/assets/uploads/2018/03/Chapter-2-Bioenergy-1.pdf>

<sup>5</sup> <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32018L2001&from=EN>

<sup>6</sup> <https://www.iea.org/countries/finland>

<sup>7</sup> [From 1st- to 2nd-Generation Biofuel Technologies – Analysis - IEA](#)

<sup>8</sup> [Europe's renewable energy directive poised to harm global forests | Nature Communications](#)

<sup>9</sup> [https://gef.eu/wp-content/uploads/2017/01/A\\_strategy\\_for\\_a\\_bio-based\\_economy.pdf](https://gef.eu/wp-content/uploads/2017/01/A_strategy_for_a_bio-based_economy.pdf)



In March 2020, a technical expert group (TEG) proposed an EU taxonomy for sustainable finance that specified mitigation thresholds and “do no significant harm” (DNSH) criteria for eligible activities. The DNSH-criteria are developed to make sure that progress against some objectives is not made at the expense of others and recognizes the relationships between different environmental objectives<sup>10</sup>. In April 2021, EU published its delegated act to outline its proposed technical screening criteria for climate adaptation and mitigation objectives, respectively, which it was tasked to develop after the EU Taxonomy Regulation it entered into law in July 2020<sup>11</sup>. The EU Taxonomy establishes criteria for the activity “Manufacture of biogas and biofuels for use in transport mitigation”. The threshold for greenhouse gas emission savings from the manufacture of biofuels and biogas for use in transport are at least 65 % for new plants in relation to the GHG saving methodology and the relative fossil fuel comparator. Fintoil’s alignment with the EU Taxonomy, including DNSH assessment has not been fully considered in this report, but the company confirmed that its refinery and production will be aligned with best effort basis with the EU Taxonomy and contribute to the disclosed Climate Change Mitigation measures.

### Governance Assessment

Four aspects are studied when assessing the Fintoil’s governance procedures: 1) the policies and goals of relevance to the green bond 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.

Fintoil has estimated the emissions for scope 1 and 2, but not yet for scope 3. Fintoil aims to have a carbon free production process by 2027, by replacing natural gas in the production process by green energy, when the technology become available. However, the carbon free production target is related to the process only, and the issuer informed us that carbon offsets are not considered. Furthermore, Fintoil informed us that its close relation with its supply chain ensures the traceability and original location of its raw material and that the company requires ISCC certification for CTO raw material. However, the company is not screening for suppliers with high emissions activities, nor require them to consider the climate impact of their operations. The company does not have a specific code of conduct for its suppliers, only assuming that they will respect the local regulation where they operate. Also, 25% of the CTO feedstock is expected to be sourced outside Northern European countries (North America), thus can potentially negatively impact the final emissions reduction. Furthermore, the company is not yet conducting climate risk assessments in line with the TCFD recommendations, nor is using climate scenarios analysis.

Fintoil has established a Green Finance Committee for the selection process, including environmental competence, and decisions are based on consensus. However, the final investment decisions are always made by the board of directors. Furthermore, it does not appear that the issuer is considering environmental and climate factors such as lock-in and rebound effects, transportation, and location considerations within the selection process. The issuer confirms that only one project is eligible at the moment, but that it will remove controversial projects if needed in the future. Furthermore, the company will annually create a report on the allocation and impact of Green Bonds issued under this Green Finance Framework. The reports will be subject to statutory annual audit of governance by Fintoil’s external auditors and will be publicly available on Fintoil’s website.

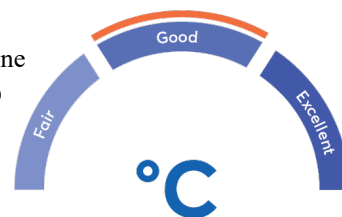
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<sup>10</sup> [https://ec.europa.eu/knowledge4policy/publication/sustainable-finance-teg-final-report-eu-taxonomy\\_en](https://ec.europa.eu/knowledge4policy/publication/sustainable-finance-teg-final-report-eu-taxonomy_en)

<sup>11</sup> [EU taxonomy for sustainable activities | European Commission \(europa.eu\)](#)



The company would benefit from systematically addressing climate risks, in line with the TCFD recommendations, and using climate scenarios analysis. CICERO Green also encourages the issuer to develop a systematic approach to exclude potentially controversial suppliers with fossil intensive activities, and to have more specific supply chain requirements and KPI for eligible assets.



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

### Strengths

It is a clear strength that Fintoil will provide an alternative to fossil fuel, by producing 2<sup>nd</sup> generation biofuels from residual and waste products and other products from CTO raw material, and by this is contributing to the circular economy. There is an increasing need for biofuels for use in e.g., the transport sector, as it has a significant greenhouse gas mitigation potential. 2<sup>nd</sup> generation or higher advanced biofuels, have a lower climate impact than first generation as they reduce the risk of indirect land use change. It is considered a strength that the company is working to increase their production, as biofuels are important for the EU to meet its GHG-reduction target.

It is a strength that the company can reduce the GHG emissions up to 90 % in the total value chain, compared to similar fossil fuels-based products (according to the issuer). In the EU Taxonomy, the threshold for greenhouse gas emission savings from the manufacture of biofuels and biogas for use in transport are at least 65 % for new plants in relation to the GHG saving methodology and the relative fossil fuel comparator.

### Weaknesses

Investors should be aware that a large share of natural gas is involved in the production process, and that fossil fuel powered equipment and machinery are involved in the operation of the biorefinery. However, the boiler reliant on natural gas is not included under the framework and is only rented by the company. The company also aims to replace the boiler by another boiler not requiring the use of fossil fuel, and to have a carbon free production process by 2027, conditional on the available technology.

### Pitfalls

The governance of the company represents a pitfall, and Fintoil could significantly improve its governance procedures. The issuer is not yet reporting on scope 3 emissions and construction emissions. The selection process could also be strengthened, as it does not appear that the company have a systematic approach to exclude potentially controversial projects, as well as suppliers and customers with fossil intensive activities, nor is considering environmental and climate factors such as lock-in and rebound effects, transportation and location impacts, even if the biorefinery project is the only eligible project. CICERO Green encourages the issuer to have more specific supply chain requirements and a systematic approach to exclude potential controversies. Furthermore, the issuer informed us that it is not yet conducting climate risk assessments in line with the TCFD recommendations, nor is using climate scenarios analysis. According to the Finnish climate guide<sup>12</sup>, increased rainfall, and snowfall being replaced by rainfall in winter, will probably increase river flows and floods. The issuer would benefit from a more systematic inclusion of climate risk and scenarios into the management systems and reporting, in line with the TCFD recommendations. Finally, the project category does not include more specific KPI, eligibility criteria, or targets. We therefore encourage the issuer to better define KPI, eligible criteria and targets for the new project, as well as for future projects that the company may have.

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<sup>12</sup> Impacts - ilmasto-opas.fi



The selection criteria for the CTO specifies that the raw material needs to be 100% ISCC Certification, which includes, reduction of greenhouse house gases emissions (GHG), sustainable land use, protection of natural biospheres, and increase of social sustainability. However, the company does not go beyond the certification's requirements when selecting the country of origin of the CTO raw material, as the issuer informed us that it expected that 25% of CTO feedstock will be sourced from North America, which increase the need for transportation, and thus related emissions. However, the company mentioned that it will focus on reducing transport emissions by favoring freight providers who can provide green solutions for sea freight. CICERO Green encourages the issuer to keep working on reduction of emissions from transportation, and to have more specific requirements for the suppliers, as well as a code of conduct that will be applied to all suppliers, without simply assuming that they will respect the local regulations of the country where they operate.

Investors should also be aware that the pulp and paper sector may involve an important share of fossil fuel, and that the company is not screening for intensive fossil fuel suppliers and customers. There is a risk that Fintoil does not currently sufficiently screen for suppliers with high emissions activities, and that end products can be used by clients in operations that can potentially have high level of emissions. However, the issuer mentioned not excluding any clients, as all its products replace hydrocarbons.



# Appendix 1: Referenced Documents List

Document Number	Document Name	Description
1	Fintoil Hamina Green Finance Framework, dated May 2021 V.5	Dated June 2021
2	Fintoil CO <sub>2</sub> calculations	Excel Sheet
3	Fintoil carbon offset calculations	Excel Sheet
4	Fintoil Muistio dated February 2020	Memorandum Gaia Consulting Oy dated 21 <sup>st</sup> February 2020
5	Cashman, Sarah A., Kevin M. Moran, and Anthony G. Gaglione. "Greenhouse gas and energy life cycle assessment of pine chemicals derived from crude tall oil and their substitutes." Journal of Industrial Ecology 20.5 (2016): 1108-1121.	Journal Article from Industrial ecology. 2016 <a href="https://doi.org/10.1111/jiec.12370">https://doi.org/10.1111/jiec.12370</a>



## 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).

