



Île-de-France Mobilités (IDFM) Green Bond Second Opinion

May 11, 2021

Île-de-France Mobilités (IDFM) is the organizing authority for the development of public passenger transport services within the region of Île-de-France. IDFM includes a total of 1,500 bus routes, 14 metro lines, 9 tram lines, and 13 train and RER lines crossing the Region of Île-de-France. This represents 9.4 millions daily trips that are made by the regional residents using these collective transports.

Projects financed under this framework aim at reducing greenhouse gas emissions linked to travel by offering public and collective transports solutions to the residents of the region of Ile de France. The eligible green project will be attributed to the category of clean transportation. The majority of proceeds (55%) are expected to be allocated to the renovation and renewal of the public electric rail transport rolling stock. Smaller shares of the proceeds will also be allocated to electric/hydrogen buses (17%), passive/energy plus operation and maintenance centers (19%), and acquisition of electrically assisted bicycles and improvement of accessibility and services (9%). As the average emissions factor for the grid in France is generally below 65g CO₂/kWh, it reinforces the potential benefits of investing in electric public transport.

Île-de-France Mobilités seems to fulfil the minimum social safeguards and to comply with the applicable mitigation and the Do-No-Significant-Harm (DNSH)-criteria for relevant categories in the EU taxonomy. However, the company could improve by more explicitly including climate projections and scenarios within the vulnerability and climate risk assessment, by better integrating potential adverse social risks, as well as by establishing more ambitious measures at the company level that go beyond what is required by regional, national and/or European directives.

At the company level, IDFM mentioned that it produces a study every 3 years on the company's internal carbon footprint in addition to the annual environmental report on its activities for its scope 1,2 and 3. However, the company does not report annually, nor is in line with any reporting standards. The issuer also selects the suppliers based on their corporate social responsibility policy, their commitment to the transition to a circular economy, and the carbon impact and the minimal lifetime of the manufacturing material, but not yet based on their CO₂ emissions. The company also carries out mandatory environmental impacts assessments (EIAs), which including climate risk and vulnerability assessment. However, the issuer has no ambitious target at the company level.

Based on the overall assessment of the eligible green assets under this framework and governance and transparency considerations, IDFM's green bond framework receives a **CICERO Dark Green** shading and a governance score of **Good**. To improve the framework, IDFM could have more ambitious targets and measures at the company level, and implement the TCFD recommendations.

SHADES OF GREEN

Based on our review, we rate the IDFM's green bond framework **CICERO Dark Green**.

Included in the overall shading is an assessment of the governance structure of the green bond framework. CICERO Shades of Green finds the governance procedures in IDFM'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 **April 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 Île-de-France Mobilités' green bond framework and related policies

Île-de-France Mobilités (IDFM) is the organizing authority for the development of public passenger transport services, as well as for the coordination of all mobility-related policies within the region of Île-de-France. IDFM includes a total of 1,500 bus routes, 14 metro lines, 9 tram lines, and 13 train and RER (Regional Express Network) lines crossing the Region of Île-de-France. This represents 9.4 millions daily trips that are made by the regional residents using these collective transports, and an average of 4.2 million users per day. Île-de-France Mobilités established contracts with other transport companies, such as RATP and SNCF. These transport companies are responsible for the functioning of their assigned lines.

Environmental Strategies and Policies

At the company level, IDFM mentioned that it produces a study every 3 years on the company's internal carbon footprint in addition to the annual environmental report on its activities. The last study was carried out in 2018 and covers 2016's emissions for scope 1,2, and 3, representing a total of 7 546 teqCO₂. The internal carbon footprint has identified the main sources of GHG emissions linked to the company's activity, where 81% come from inputs, in particular the purchase of external services. However, IDFM does not report annually on the company's emissions, nor is in line with any reporting standards. The issuer also informed us that the scope of its carbon footprint excludes emissions related to the operation of transport which are within the scope of operators (scope 3). To limit the company's emissions, the issuer mentioned having environmental strategies and policies, including a responsible purchasing policy, better paper management, the development of videoconferencing to avoid transport when possible, and the improvement of the energy efficiency of its equipment.

Île-de-France Mobilités also aims at reducing greenhouse gas emissions linked to travel, by offering and further increasing public and collective transports solutions to the residents of the region within the next ten years. Through the "Grand Paris Express Project", IDFM aims at extending existing, and developing new, metro, tram and RER lines, as well as the regional metro with the construction of 68 stations into 4 new high performance automatic metro lines around Paris, all powered and heated by electric traction. Regarding its railroad rolling stock, IDFM informed us that the fleet is 99% electric at the moment, and the company aims to own 100% electric trains in the future.

Regarding its road rolling stock, the issuer informed us that the share of diesel buses (other than diesel 6) is at 45% in 2021, and the share of hybrid/electric/biomethane buses is at 30%. The remaining percentage is Diesel 6. Île-de-France Mobilités has informed us that it has purchased in 2021 more than 1,000 buses, including the renewal of the batteries of around 150 electric and hybrid buses as well as the purchase of on-board equipment and the technical upgrading of vehicles reaching mid-life. The issuer also mentioned that it bought 7 hydrogen buses in 2020, carries out technical studies and tenders in 2021 and 2022, and expects to buy 17 hydrogen buses in 2023. The issuer further mentioned being in the process of identifying potential sites for production of hydrogen and being in discussion with a hydrogen supplier company, in order to have locally produced hydrogen. The issuer aims at no longer purchasing diesel vehicles for its road rolling stock by owning 100% of clean buses and coaches by 2030 for the region of Ile de France, by orienting the energy mix towards electricity and hydrogen. The issuer also confirmed aiming at including biomethane in the energy mix, but informed that this type of energy will not be financed by green bonds.

The new buses will be rolled out as soon as the energy conversion of 16 bus operational centers is completed in 2023. IDFM informed us that a total of 87 bus centers will be bought/built/converted in 2024 to accommodate new vehicles. For the construction site, the choice of the site is determined by the "Zero net artificialization" objective



of the issuer, focusing on the selection of already existing infrastructures located in industrial or business zones. The issuer informed us that mandatory environmental impacts assessments (EIAs) are systematically carried out in the design phase to determine the impacts on the physical and natural environment, the vulnerability of the territory to natural and technological risks, the impacts on the landscape, and cultural heritage of the site, as well as potential presence of protected species. If protected species are present in the selected construction site, the ERC doctrine (Avoid, Reduce and Compensate) is implemented by the issuer, whom either avoid the construction or re-naturalize the space after construction. When the bus operations centers are built on a natural, forestry or agricultural zone, the issuer may be required to consider environmental or agricultural compensation measures. Also, Ile-de-France Mobilités sets 3 priority and mandatory targets to be integrated into the HQE (High Environmental Quality) Infrastructures approach for its sites and operation centers, which focus on the control of energy consumption and the carbon emissions of the project, by aiming toward having passive/energy plus operation centers, the control of rainwater and water consumption, and the integration of landscape and biodiversity.

The issuer informed us that climate risks are analyzed through several orientation documents. The issuer further mentioned complying with regional regulations and directives by carrying out EIAs which include climate risk and vulnerability assessments, e.g., for extreme temperature and flooding. These assessments also include the carbon impact of the project, as well as vulnerability assessment, both during the construction and the operation phases, according to the issuer. However, the issuer has not yet implemented the TCFD recommendations.

The issuer is also encouraging cycling, carpooling and car sharing, via its long-term rental service for electrically assisted bicycles (Véligo), the creation of bicycle parking places near train and metro stations, and the implementation in 2017 of a carpooling financial incentive scheme intended for the inhabitants of the region, as well as for IFDM's employees.

On an annual basis, Île-de-France Mobilités submits a report on its situation regarding sustainable development, including its operations, policies, programs and activities that are likely to improve the situation of the company with regard to sustainable development. This report is available on the Île-de-France Mobilités website.

Use of proceeds

An amount equivalent to the net proceeds raised from any Île-de-France Mobilités Green Bond issued under this Green Bond Framework will be allocated to finance, in whole or in part, eligible green projects within the region of Ile-de-France. The issuer further confirmed that the Green Bonds will finance ongoing and future projects, and thus the refinancing share is expected to be minor, exception made for the first year of the issuance. All eligible green projects focus on the clean transportation category, and fall into the following sub-categories, including their likely share of net proceeds according to the issuer: renovation and renewal of surface public transport rolling stock (17% for the renewal of the current buses by electric and hydrogen buses), renovation and renewal of the public rail transport rolling stock (55% for the acquisition and renovation of equipment for train, metro, tram-train, and tramway), renovation and renewal of infrastructure enabling low-carbon public transport (19% for the bus operations center under construction or existing under renovation, and SNCF Maintenance Center), and improving the quality of service for mobility (9% for the improvement of passenger information, of the ticketing system, and of the accessibility, as well as acquisition of electrically assisted bicycles and subsidies to individuals for the purchase of electrically assisted bicycles Véligo). The company further informed us that IDFM will finance the purchase of rolling stock and the operation of lines (commissioning of all lines in 2030). However, no net proceeds will be used for infrastructure, e.g., tunnels.

Île-de-France Mobilités has defined a list of exclusions for projects to be financed under this Green Bond Framework. The purchase of any vehicle linked to fossil fuels are excluded from eligible asset. The share of assets already financed by another financier or operator are also excluded from eligible assets.



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.

The Finance and Public Procurement Department of IDFM will carry out a pre-selection of eligible assets. Projects will also be selected by the identification of assets that are partially financed by Ile-de-France Mobilités' partners, including RATP, SNCF and SGP, so that only the portion of projects financed by IDFM itself is included in the Framework to avoid double counting of assets.

Île-de-France Mobilités has established a Green Bond Working Group (GBWG) that will validate by consensus the selection of assets for the attributed year. The GBWG consists of representatives from the following departments: Finance Purchasing and Contracts, Foresight and Studies, Infrastructure, Rail, Surface Mobility, and Intramodality, Services and Marketing. The GBWG will be chaired by the Finance, Purchasing and Contracts Department and will meet on an annual basis. Environmental experts will also be included in the GBWG according to the issuer and will have access to available environmental studies for the preparation of projects.

The issuer further informed us that one of the criteria for selecting suppliers and contractor's offers is based on the companies' corporate social responsibility policy, including, e.g., their commitment to the transition to a circular economy. The selection criteria for the contractors and the suppliers may vary, but always include the carbon impact of the manufacturing material as well as the minimal lifetime of the material. The company further informed us that it includes environmental clauses, e.g., the rate of recoverability and recyclability of the bus with calculations, and/or details on how the actions and activities of the potential supplier, directly or indirectly integrate environmental and sustainable development concerns, in most of its tenders, but not in a systematical way. Furthermore, the issuer confirmed that it does not select suppliers based on their CO₂ emissions, and when buying bus or trains, most of the requirements related to the materiality and not the company's emissions.

For controversial projects, IDFM mentioned having a "Concertation and information" Department, composed of 8 people who are dedicated to controversial issues. The issuer confirmed doing concertation before and during the construction of the infrastructures, as mandatory by regional regulations. IDFM mentioned that its actions are composed of information, explanation of the projects to inhabitants and shop owners, mediation, and meetings with local stakeholders. In case of a conflict, the issuer can propose financial compensation or adaptation of the project. If necessary, a local commission can be set up to find solution where needed.

Management of proceeds

CICERO Green finds the management of proceeds of Île-de-France Mobilités to be in accordance with the Green Bond Principles.

The net proceeds of each Île-de-France Mobilités Green Bond will be allocated towards eligible green projects originated no more than three years prior to the issuance. The proceeds will be allocated within two years from the date of issuance. A system for identifying the capital expenditures allocated to the green bond will be implemented in Île-de-France Mobilités' financial management software, in order to allow automatic allocation of expenditures according to the eligible asset sub-categories of the Framework. If funds cannot be immediately and fully allocated, or in the event of any early repayment, proceeds will be held in line with Île-de-France Mobilités general liquidity guidelines until full allocation to eligible green projects. The issuer further confirmed that the Green Bond funds cannot be dedicated to fossil fuel related projects or industries, and that it is unlikely that Ile de France Mobilité will have unallocated proceeds.



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.

Each year, Île-de-France Mobilités will publish an allocation report and an impact report on its Green Bond issues. These reports will be updated annually until the net funds raised by all green bonds issues are fully allocated, or until Île-de-France Mobilités' green bonds are no longer on the market.

On the allocation reporting, Île-de-France Mobilités will provide information on the Eligible Green Projects Portfolio on the company's website. The information will contain the following: The total amount of proceeds allocated to the Eligible Green Projects; Breakdown of allocation by eligible project category; Allocation by geographic location; Refinancing versus new financing; and the Balance of unallocated proceeds. In addition, IDFM may refer to an external auditor, which has not been selected yet, to verify the compliance of assets financed by the Green Bond proceeds with eligibility criteria, the allocated amount related to the eligible Green projects financed by the Green Bond proceeds, as well as the management of proceeds and unallocated proceeds amount. The external auditor's report will be published on Île-de-France Mobilités' website.

On the impacts reporting, Île-de-France Mobilités will provide, where feasible, reporting at the project level on relevant potential impact metrics for Eligible Green projects. These impact metrics can include, but are not limited to, CO₂ emissions per passenger km travelled (gCO₂ /passenger.km), total GHG emissions reductions and total emissions reduction by project (tCO₂ eq), number of electric/hydrogen vehicles deployed, CO₂ emissions per passenger km travelled (gCO₂ /pass.km), estimated energy savings (KWh), reduction of air pollutants: particulate matter, % recyclability of material purchased, etc. The issuer informed us that the emissions reduction and the energy savings will be compared to the actual rolling stock that will be replaced and/or improved. The issuer also aims at calculating the emissions reduction in a life cycle perspective by 2022, including the footprint of the bus, train, metro, tram-train, and tramway production. The issuer further informed us that the impact reporting will be externally reviewed and available on IDFM's website.



3 Assessment of Île-de-France Mobilités’ green bond framework and policies

The framework and procedures for Île-de-France Mobilités’ 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 Île-de-France Mobilités 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 Île-de-France Mobilités’ green bond framework, we rate the framework **CICERO Dark Green**.

Eligible projects under the Île-de-France Mobilités’ green bond framework

At the basic level, the selection of eligible project categories is the primary mechanism to ensure that projects deliver environmental benefits. Through selection of project categories with clear environmental benefits, green bonds aim to provide 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
<p>Clean Transportation (Renovation and renewal of surface public transport rolling stock)</p> 	<ul style="list-style-type: none"> • Acquisition for renewal of clean buses ✓ The direct (tailpipe) CO₂ emissions of the vehicles are zero. 	<p>Dark Green</p> <ul style="list-style-type: none"> ✓ The issuer informed that this category represents the renewal of the current buses by electric and hydrogen buses. ✓ Zero-emission buses running on 100% renewable electricity are part of a 2050 solution. ✓ The representativeness of the national grid factors for electricity should be considered. ✓ The issuer mentioned identifying potential sites for production of hydrogen and being in discussion with a hydrogen supplier company, in order to have locally produced hydrogen. Investors should however be aware that if the production of hydrogen involves the use of natural gas, it contributes to the emission of greenhouse gasses. ✓ The issuer informed us that IDFM is not investing in renewable electricity production, but is however working with companies producing renewable energies. ✓ The production of batteries and sourcing of raw materials can have substantial climate and environmental impact.



**Clean
Transportation**
(Renovation
and renewal of
public rail
transport rolling
stock (train,
metro, tram-
train, tramway))



- Acquisition & renovation of equipment (train, metro, tram-train, tramway)
- ✓ The direct (tailpipe) CO₂ emissions of the vehicles are zero.

Dark Green

- ✓ The majority of the net proceeds (55% will be attributed to this category)
- ✓ Upgrading metro lines with more efficient zero emission vehicles, and renovation of the rail transport rolling stocks constitute a Dark Green solution in clean urban transport.
- ✓ Construction and maintenance are emitting CO₂ and should be monitored and minimized.
- ✓ The issuer confirmed that the rolling stock financed by the Green Bond will not be heated nor powered by fossil fuels.
- ✓ The issuer confirmed that only rolling stock is included under this category and that the infrastructure (e.g., railway tracks, subway lines) are excluded.

**Clean
Transportation**
(Renovation
and renewal of
infrastructure
enabling low-
carbon public
transport)



- Bus Operations Center under construction or existing under renovation
- SNCF Maintenance Center
- ✓ The infrastructure is dedicated to low-carbon public transport

Medium to Dark Green

- ✓ The issuer mentioned that the choice of renewable energies depends on local potential, but it remains possible that in the context of the energy mix selected on a site, a gas condensing boiler will complete the system. However, the issuer confirmed that no direct investments in fossil fuel-based heating will be financed under this framework.
- ✓ The issuer mentioned that all buildings financed under this category need to be passive/energy plus. Rehabilitated buildings also need to have energy consumption reduced by 40% compared to prior rehabilitation, with a minimum renewable energy production of 20 Wh/m².an.
- ✓ The issuer informed that as part of the energy renovations of bus centers, solar panels could be installed.
- ✓ Construction, renovation, and maintenance are emitting CO₂ and should be monitored and minimized. However, the issuer mentioned that the upcoming infrastructure will ensure that carbon emissions are identified, control and limited during the construction phase (through the choice of materials, low-emitting concrete, etc.)¹. In the operating phase, limiting carbon emissions includes controlling energy consumption and using renewable energies selected for buildings, according to the issuer.

¹ Niveaux de performance - Bâtiments à Énergie Positive et Réduction Carbone (batiment-energiecarbone.fr)



		<ul style="list-style-type: none"> ✓ IDFM is aligned with the HQE infrastructure strategy which requires that minimum 40% of terrace roofs must be vegetized. ✓ While IDFM considers some climate risks, bus operations centers and other physical assets might be exposed to physical climate risks.
<p>Clean Transportation (Improving the quality of service for mobility)</p> 	<ul style="list-style-type: none"> • Improvement of passenger information • Improvement of the ticketing system • Improved accessibility (e.g., for people with reduced mobility) • Acquisition of electrically assisted bicycles and subsidies to individuals for the purchase of electrically assisted bicycles Véligo. ✓ The project facilitates access to low-carbon transport. 	<p>Dark Green</p> <ul style="list-style-type: none"> ✓ Improving public transport infrastructure with improved accessibility and other measures incentivizing increased use of public transport is part of a Dark Green solution. ✓ The issuer informed that the improved accessibility infrastructure can include, but are not limited to, the installation of automatic doors, counters and accessible ticket vending machines, the installation of elevators, etc. In the rolling stock, this includes lower floors and access ramps in buses, adapted seats, visual information and sound, etc.

Table 1. Eligible project categories

Background

Global transport emissions increased by less than 0.5% in 2019 (compared to 1.9% annually since 2000) owing to efficiency improvements, electrification and greater use of biofuels. Nevertheless, transportation is still responsible for 24% of direct CO₂ emissions from fuel combustion. Road vehicles – cars, trucks, buses and two- and three-wheelers – account for nearly three-quarters of transport CO₂ emissions, and emissions from aviation and shipping continue to rise, highlighting the need for greater international policy focus on these hard-to-abate subsectors². The transport sector is in a critical transition. Existing measures to increase efficiency and reduce energy demand must be deepened and extended for compliance with the Sustainable Development Scenario (SDS).

This process should be set in motion in the upcoming decade, as any delay would require that stricter measures be taken beyond 2030, which could noticeably raise the cost of reaching climate targets. Combined efforts across all transport modes, accompanied by power sector decarbonisation, will be crucial to achieve SDS goals³. The largest amount of carbon savings come from switching from inefficient modes of transport (e.g., private cars) to mass transit⁴. For projects aimed at like-for-like replacement of transport infrastructure, the improvements in environmental performance depend on the fuel type and efficiency. We consider public transport projects that include fossil fuel elements such as hybrid buses as bridging technologies, and not a long-term solution. While electric modes of transportation are preferable to those that directly use fossil fuels, we should nevertheless be aware of the indirect GHG emissions stemming from the production and use and strive to keep increasing their efficiency.

In France, passenger transport represented in 2019 around 988 billion passengers.km, where 81% are carried out in individual cars and two wheels, and 19% by public transport, including 59% by train, metro or RER. Also, 31% of the total GHG emissions of France came from the transport sector in 2019, which represents 136 Mt CO₂ eq for

² [Tracking Transport 2020 – Analysis - IEA](#)

³ [Ibid.](#)

⁴ [WG1AR5_Chapter08_FINAL.pdf \(ipcc.ch\)](#)



the transport sector only⁵. Furthermore, the transport sector is also responsible for an important share of atmospheric pollutants, as it contributes to 20% of direct emissions of fine particles and to 53% of nitrogen oxide emissions⁶. In its objective to become carbon neutral in 2050, the Government of France had undertaken, with the first National Low-Carbon Strategy adopted in 2015, to divide its GHG emissions by 6 by 2050 compared to 1990. Concretely, this assumes reducing France's emissions to 80 MtCO_{2e} against 458 MtCO_{2e} in 2015 and 445 MtCO_{2e} in 2018⁷. Low-emission and public transport have therefore a key role to play in the carbon transition in Ile-de-France, and more widely in France to reach the carbon neutrality in 2050 as set in the National Low-Carbon strategy.

Due to the structure of the energy mix, electricity generation in France has historically been low in carbon. CO₂ emissions relating to electricity generation, as measured and published in real time by RTE⁸, have only ever exceeded 100g CO₂/kWh in recent years in certain exceptional cases, with peaks at 169g CO₂/kWh. The average is generally below 65g CO₂/kWh⁹. Consequently, the indirect GHG emissions, stemming from the production of electricity to power public electric rail transport rolling stock, electric buses and electrically assisted bicycles, are relatively low. It is reasonable to expect that in the future, France's energy mix will continue to become less carbon intensive, which reinforces the potential benefits of investing in electric transport.

EU Taxonomy assessment

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 towards some objectives is not made at the expense of others and recognizes the relationships between different environmental objectives¹⁰. In November 2020, EU published its draft delegated act to outline its proposed technical screening criteria for climate adaptation and mitigation objectives, respectively, which it was tasked to develop after it entered into law in July 2020¹¹. We have assessed eligible projects in IDFM's green finance framework against the mitigation thresholds and the DNSH criteria in the Annex 1 (mitigation) to the delegated act published in April 2021¹². CICERO Green has conducted a light touch assessment of the minimum safeguards (social aspects) of the EU Taxonomy.

Relevant EU-Taxonomy activities in the context of IDFM's Framework are: Passenger interurban rail transport; urban, suburban and road passenger transport; operation of personal mobility devices; and infrastructure enabling low-carbon road transport. The EU Taxonomy also considers Do No Significant Harm (DNSH) criteria within four categories (which may or may not always be relevant): climate change adaptation, water, circular economy, pollution, and ecosystems.

Further, to qualify as a sustainable activity under the EU regulation 2020/852, certain minimum safeguards must be complied with. For the purposes of the implementation of the Taxonomy, the TEG considers that both companies and investors should centre compliance on (1) human rights, (2) labour rights, and (3) combating bribery, bribe solicitation and extortion. The safeguards entail alignment with the OECD Guidelines for Multinational Enterprises and UN Guiding Principles on Business and Human Rights, including the International Labour Organisation's ('ILO') declaration on Fundamental Rights and Principles at Work, the eight ILO core

⁵ Les émissions de gaz à effet de serre du secteur des transports - L'environnement en France (developpement-durable.gouv.fr)

⁶ Les émissions | Airparif

⁷ Stratégie Nationale Bas-Carbone (SNBC) | Ministère de la Transition écologique (ecologie.gouv.fr)

⁸ RTE | Le réseau de transport de l'électricité (rte-france.com)

⁹ Projet SNBC EN.pdf (ecologie.gouv.fr)

¹⁰ Taxonomy: Final report of the Technical Expert Group on Sustainable Finance, March 2020. https://ec.europa.eu/knowledge4policy/publication/sustainable-finance-teg-final-report-eu-taxonomy_en

¹¹ https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/12302-Climate-change-mitigation-and-adaptation-taxonomy#ISC_WORKFLOW

¹² [taxonomy-regulation-delegated-act-2021-2800-annex-1_en.pdf](https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/12302-Climate-change-mitigation-and-adaptation-taxonomy#ISC_WORKFLOW) (europa.eu)



conventions and the International Bill of Human Rights. CICERO Green has completed a light touch assessment of the social safeguards with a focus on human right and labor right¹³.

Île-de-France Mobilités confirms only operating in France, where the current legislation favorize the likely compliance of IDFM within the areas of human rights, labour rights and corruption. The Government of France has also ratified in 2016 the Protocol of the 1930 ILO Forced Labour Convention (no.29) and supplement the convention by dealing with new forms of forced labour. Under French law, it is a criminal offence for companies to engage in activities that breach people’s rights, equality laws, environmental laws, or social, health and safety laws. The company further informed us that it selects its suppliers and contractors based on their respect of international standards, where the companies need to fulfill administrative documentation in relation to the French Labour Law. The issuer also confirms that they require from contractors that they do not use concealed worker, especially regarding foreign workers and detached workers (workers in the EU allowed to work in other European countries), and that they have implemented obligations concerning the safety of workers on worksites. Contractors have the obligation to produce every 6 months different kind of administrative documents and IDFM can apply financial penalties if necessary. The issuer also mentioned that it includes in its contracts “social clauses” to promote access or return to employment for people experiencing particular social and/or professional difficulties. The issuer further confirms reporting under the under the French due diligence law (Loi de vigilance), as it has the obligation to abide by it. However, the issuer did not make any references to its corporate social policy, nor to its vigilance plans on how the company screens, monitors, and mitigates potential adverse social risks, but the issuer mentioned having a technical committee in house dealing with social risks, including the safety and the security of the employees.

According to the issuer, IDFM is aligned with the French law that stipulates that public contracts may not be awarded to economic operators that have been found guilty of fraud, corruption or the trafficking or exploitation of human beings. The Act on transparency, fighting corruption and modernizing the economy replacing earlier sector-specific provisions on whistleblowers, protect whistleblowers who now share a common status regardless of the field concerned. Regarding its funding, Île-de-France Mobilités’ decision to carry out a financial transaction with an organisation is assessed based on the situation of this organisation with regard to non-cooperative States and territories as defined by ministerial decree annually, in accordance with the General Tax Code. The procedures and the tools implemented by the organisation to combat corruption, money laundering and tax evasion are also assessed, as IDFM mentioned only working with financial partners that have enough safeguards concerning money laundering, corruption, etc.

Detailed thresholds, NACE-codes and likely alignment with DNSH criteria are given in Appendix 2.

Governance Assessment

Four aspects are studied when assessing the Île-de-France Mobilités’ 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.

Ile de France Mobilités’ business model is based on providing sustainable public mobility services and has implemented environmental strategies and policies to limit its emissions. At the company level, IDFM mentioned that it produces a study every 3 years on the company's internal carbon footprint in addition to the annual

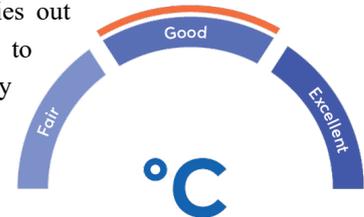
¹³ CICERO Green is in the process of further developing its assessment method to ensure that it encompasses the object and purpose of the minimum safeguards.



environmental report on its activities for its scope 1,2 and 3. However, the company has no ambitious target at the company level, e.g., to be carbon neutral for scope 1, and 2 in the future, nor report annually on the company's emissions in line with any reporting standards.

Ile de France Mobilités has created a green bond committee to select the projects to be allocated to the bond issued, and decision will require consensus. Environmental experts will also be included in the committee according to the issuer and will have access to available environmental studies for the preparation of projects. The supply chain is also included in the selection process, as the suppliers are selected based on their social responsibility policy, including, e.g., their commitment to the transition to a circular economy (sustainable use of resources, sustainable consumption, waste management, etc.), as well as the carbon impact and the minimal lifetime of the manufacturing material. However, the issuer does not select suppliers based on their CO₂ emissions, and when buying bus or trains, most of the requirements related to the materiality and not the company's emissions.

The company also mentioned aiming at calculating the emissions reduction in a life cycle perspective by 2022, including the footprint of the bus, train, metro, tram-train, and tramway production. The issuer further informed us that the impact reporting will be externally reviewed and available on IDFM's website. The company complies with regulations and directives related to flood risks and systematically carries out mandatory environmental impacts assessments (EIAs) in the design phase to determine the impacts on the physical and natural environment, the vulnerability of the territory to natural and technological risks, the impacts on the landscape, and cultural heritage of the site, as well as potential presence of protected species. However, the issuer has not yet implemented the TCFD recommendations.



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

Strengths

It is a strength that Ile-de-France Mobilités aims to achieve a substantial modal shift towards zero fossil fuel buses and rail rolling stock, by aiming at owning 100% of clean buses and coaches, focusing on electric and hydrogen buses, and by aiming at owning 100% electric trains and for the region of Ile de France. This represents a dark green solution for clean and low carbon urban transport in a 2050 perspective and contributes to the necessary transition of the transport sector in France.

In addition of having various social and environmental requirements for its different suppliers and contractors, it is a strength that the company's tenders include rate of recoverability and recyclability of the bus with calculations, and/or details on how the actions and activities of the potential supplier, directly or indirectly, integrate environmental and sustainable development concerns. However, the issuer does not select suppliers based on their CO₂ emissions, but considers the corporate social responsibility policy of potential suppliers and their commitment towards circular economy.

By adhering to the legal regime relevant to their operations, IDFM is likely to be aligned with the minimum safeguards and the main DNSH-criteria related to circular economy, pollution, and ecosystems for passenger interurban rail transport; urban, suburban and road passenger transport; operation of personal mobility devices; and infrastructure enabling low-carbon road transport.

Weaknesses

We find no material weaknesses in Ile-de-France Mobilités' Green Bond Framework



Pitfalls

While electric public transport represents a green solution for clean and low carbon urban transport in a 2050 perspective, CICERO Green encourages the issuer to strengthen its governance by having more ambitious targets at the company level and to report on its emissions on an annual basis. Also, while IDFM selects its suppliers based on their social responsibility policy, including, e.g., their commitment to the transition to a circular economy (sustainable use of resources, sustainable consumption, waste management, etc.), as well as the carbon impact and the minimal lifetime of the manufacturing material, the issuer does not select suppliers based on their CO₂ emissions. However, the issuer aims at calculating the emissions reduction in a life cycle perspective by 2022, including the footprint of the bus, train, metro, tram-train, and tramway production. Furthermore, the company includes climate risk and vulnerability assessment within its EIAs, but would benefit from implementing the TCFD recommendations, and from more explicitly taking into consideration different high emissions scenarios for physical climate impacts.

Regarding the bus operation centers, the issuer informed us that the choice of renewable energies depends on local potential, but it remains possible that in the context of the energy mix selected on a site, a gas condensing boiler will complete the system. However, the issuer confirmed that no direct investments in fossil fuel-based heating will be financed under this framework. We encourage the issuer to favorize an energy mix focusing only on renewable energy and thus avoiding the risk of lock-in. Investors should also be aware that the construction, renovation, and maintenance of infrastructure dedicated to low-carbon public transport can emit CO₂ and have environmental impacts. However, the issuer confirms that the upcoming infrastructure will ensure that carbon emissions are identified, controlled, and limited during the construction phase (through the choice of materials, low-emitting concrete, etc.) In the operating phase, limiting carbon emissions includes controlling energy consumption and using renewable energies selected for buildings, according to the issuer.

For its zero-emission bus acquisitions, IDFM expects to renew the current buses by electric and hydrogen buses. IDFM informed us that it bought 7 hydrogen buses in 2020 and expect to buy 17 hydrogen buses in 2023 and more in the future. The company mentioned identifying potential sites for production of hydrogen and being in discussion with a hydrogen supplier company in order to have locally produced hydrogen. However, investors should be aware that if the production of hydrogen involves the use of natural gas, it contributes to the emission of greenhouse gasses. IDFM should remain vigilant on climate benefits of hydrogen versus battery technology, and rather focus on electrical buses. However, the production of batteries and sourcing of raw materials can have substantial climate and environmental impact, thus CICERO Green encourages the issuer to better monitor and assess these impacts.

Ile-de-France Mobilités is likely to be aligned with the minimum safeguards and the DNSH-criteria of the EU Taxonomy for its activities. However, the company does not seem to go beyond what is required by regional, national and/or European directives for all the DNSH criteria. Also, it does not appear that IDFM has specific measures in place at the company level for certain DNSH criteria, including for Sustainable use and protection of water and marine resources, transition to circular economy under certain activities, e.g., infrastructure enabling low-carbon road transport, as well as for the DNSH criteria related to pollution prevention and control, and Protection and restoration of biodiversity and ecosystems. With regard to the minimum safeguards, the issuer mentioned reporting under the under the French due diligence law (Loi de vigilance), but CICERO Green encourages the company to better screen, monitor, and mitigate potential adverse social risks.



Appendix 1: Referenced Documents List

Document Number	Document Name	Description
1	Ile de France Mobilites Green Bond Framework	Draft version no. 14 dated April 2021
2	Rapport environmental 2020	Environmental Report dated 2020
3	Presentation of Ile de France Mobilites	Presentation dated 2020
4	Communiqué de presse: Etude émissions de polluants de l'air des bus en conditions réelles d'exploitation Airparif - Île-de-France Mobilités	Press Release dated 2021: CP IDFM Airparif Emissions des bus en conditions réelles.pdf
5	Rapport d'Étude. Bilan Carbone 2016 Ile de France Mobilités.	Dated June 2018
6	Analyse de l'état actuel de l'environnement et aperçu de son évolution en absence de mise en oeuvre du projet	Public utility investigation file
7	Exemples d'études d'impacts et mesures associées	Public investigation
8	HQE Infrastructures strategy	Technical guide and Progress point of IDFM on the implementation of the HQE Infrastructures strategy.
9	Examples of social and environmental requirements in contracts-tenders	Extracts from various contracts-tenders.



Appendix 2: EU Taxonomy criteria and alignment

Complete details of the EU taxonomy criteria are given in [taxonomy-regulation-delegated-act-2021-2800-annex-1_en.pdf \(europa.eu\)](https://eur-lex.europa.eu/eli/reg/2021/2800/annex-1_en.pdf)

Passenger interurban rail transport

Framework activity	Clean transportation		
Taxonomy activity	6.1 Passenger interurban rail transport (NACE Code H49.10)		
Taxonomy version	EU Technical mitigation criteria	Comments on alignment	Alignment
Mitigation criteria	<ul style="list-style-type: none"> The activity complies with one or both of the following criteria: <ul style="list-style-type: none"> (a) the trains and passenger coaches have zero direct (tailpipe) CO₂ emissions. (b) the trains and passenger coaches have zero direct tailpipe CO₂ emission when operated on a track with necessary infrastructure and use a conventional engine where such infrastructure is not available (bimode). 	<ul style="list-style-type: none"> Under this category the issuer will support the acquisition and the renovation of equipment related to train, metro, tram-train, and tramway. According to the issuer, all IDFM's vehicles financed under the sub-category of Renovation and renewal of public rail transport rolling stock (train, metro, tram-train, tramway) meet the technical mitigation criteria as the direct (tailpipe) CO₂ emissions of the vehicles are zero. “The use of a conventional engine where such necessary infrastructure is not available” does not apply in the context of IFDM. 	Likely aligned.
	EU Taxonomy DNSH-criteria	Comments on alignment	Alignment



Climate change adaptation	<ul style="list-style-type: none"> The activity complies with the criteria set out in Appendix A of the EU Taxonomy Annex. 	<ul style="list-style-type: none"> According to the issuer, IDFM is compliant with the following national laws and regulations where required. France has implemented a National Climate Change Adaptation Plan 2018-2022 (PNACC-2) by taking into account the European Union adaptation strategy and in order to enforce the necessary actions to adapt the Metropolitan and overseas French territories by 2050 to the expected regional climate changes. The PNACC-2 measures take into account the transport sector included in the IDFM Green Bond Framework. The issuer considers therefore that IDFM meets the Climate Change Adaptation DNSH criteria for all the activities included in the Framework. The issuer mentioned that climate risks are analyzed through several orientation documents. All transport projects financed by IDFM are in accordance with regional orientation and planning documents such as the SDRIF (Master plan for the Île-de-France region) and the PDUIF (Urban transport plan for Île-de-France). IDFM also complies with regulations and directives related to flood risks (DRIEAT Île-de-France Regional and Interdepartmental Directorate for the Environment, Planning and Transport). The issuer informed us that climate risks are analyzed through several orientation documents on the scale of the Ile de France region. The issuer further mentioned that EIAs carried out include climate risk and vulnerability assessment, e.g., for extreme temperature and flooding, complying with regional regulations and directives on that matter. These assessments also include the carbon impact of the project, as well as vulnerability assessment, both for construction and exploitation phases, according to the issuer. The issuer informed us using climate projections and scenarios in its environmental impact assessments, and confirmed carrying out assessments of adaptation solutions in its assessments and studies that can reduce identified physical climate risks in the case where an activity is assessed to be at risk from physical climate risks. 	Likely aligned.
Sustainable use and protection of water and marine resources (water management)	<ul style="list-style-type: none"> N/A 		N/A
Transition to circular economy	<ul style="list-style-type: none"> Measures are in place to manage waste in accordance with the waste hierarchy, in particular during maintenance. 	<ul style="list-style-type: none"> The issuer confirms that they are imposing clauses in contracts with suppliers and contractors in accordance with regulatory obligations in terms of reuse of waste on site. 	Likely aligned.
Pollution prevention and control	<ul style="list-style-type: none"> Engines for the propulsion of railway locomotives (RLL) and engines for the 	<ul style="list-style-type: none"> The DNSH criteria for pollution prevention and control is not relevant for the activity of the issuer under this Taxonomy activity, as only the acquisition and renovation of 	N/A



	propulsion of railcars (RLR) comply with emission limits set out in Annex II to Regulation (EU) 2016/1628 of the European Parliament and of the Council ¹⁴	equipment vehicles (train, metro, tram-train, tramway) with zero direct (tailpipe) CO2 emissions are eligible under this framework.	
Protection and restoration of biodiversity and ecosystems	<ul style="list-style-type: none">• N/A		N/A

¹⁴ Regulation (EU) 2016/1628 of the European Parliament and of the Council of 14 September 2016 on requirements relating to gaseous and particulate pollutant emission limits and type-approval for internal combustion engines for non-road mobile machinery, amending Regulations (EU) No 1024/2012 and (EU) No 167/2013, and amending and repealing Directive 97/68/EC (OJ L 252, 16.9.2016, p. 53).



Framework activity	Clean transportation		
Taxonomy activity	6.3 Urban, suburban and road passenger transport (NACE Code H49.31, H49.3.9 and N77.11)		
Taxonomy version	EU Technical mitigation criteria	Comments on alignment	Alignment
Mitigation criteria	<ul style="list-style-type: none"> the activity provides urban or suburban passenger transport and its direct (tailpipe) CO2 emissions are zero¹⁵. until 31 December 2025, the activity provides interurban passenger road transport using vehicles designated as categories M2 and M3¹⁶ that have a type of bodywork classified as ‘CA’ (single-deck vehicle), ‘CB’ (double-deck vehicle), ‘CC’ (single-deck articulated vehicle) or ‘CD’ (double-deck articulated vehicle)¹⁷, and comply with the latest EURO VI standard, i.e. both with the requirements of Regulation (EC) No 595/2009 and, from the time of the entry into force of amendments to that Regulation, in those amending acts, even before they become applicable, and with the latest step of the Euro VI standard set out in Table 1 of Appendix 9 to Annex I to Regulation (EU) No 582/2011 where the provisions governing that step have entered into force but have not yet become applicable for this type of vehicle¹⁸. Where such standard is not available, the direct CO2 emissions of the vehicles are zero. 	<ul style="list-style-type: none"> Under this category, the issuer will support the acquisition for renewal of clean buses, including electric and hydrogen buses having a direct (tailpipe) CO2 emission of zero. According to the framework, all IDFM’s vehicles financed under the sub-category of renovation and renewal of surface public transport rolling stock meet the technical mitigation criteria. 	Likely aligned.
	EU Taxonomy DNSH-criteria	Comments on alignment	Alignment

¹⁵ This includes Motor buses with type of bodywork classified as ‘CE’ (low-floor single-deck vehicle), ‘CF’ (low-floor double-deck vehicle), ‘CG’ (Articulated low-floor single-deck vehicle), ‘CH’ (Articulated low-floor double-deck vehicle), ‘CI’ (open top single deck vehicle) or ‘CJ’ (open top double deck vehicle), as set out in point 3 of part C of Annex I to Regulation (EU) 2018/858

¹⁶ As referred to in Article 4(1), point (a)(i), of Regulation (EU) 2018/858.

¹⁷ As set out in point 3 of part C of Annex I to Regulation (EU) 2018/858

¹⁸ Until 31/12/2021, the EURO VI, step E as set out in Regulation (EC) No 595/2009



Climate change adaptation	<ul style="list-style-type: none"> The activity complies with the criteria set out in Appendix A of the EU Taxonomy Annex. 	<ul style="list-style-type: none"> See comments on alignment for Climate Change Adaptation DNSH criteria for Taxonomy Activity 6.1 above. 	Likely aligned.
Sustainable use and protection of water and marine resources (water management)	<ul style="list-style-type: none"> N/A 		N/A
Transition to circular economy	<ul style="list-style-type: none"> Measures are in place to manage waste, in accordance with the waste hierarchy, both in the use phase (maintenance) and the end-of-life of the fleet, including through reuse and recycling of batteries and electronics (in particular critical raw materials therein). 	<ul style="list-style-type: none"> For battery-operated fleet, the issuer informs that manufacturers are required to take the batteries back at their end-of-life (7 to 10 years depending on the model of electric bus). The rate of recycling reaches 70 to 80% provided by a dedicated recycling branch. The issuer further informed that it cannot reach a better recycling rate as not all used material is recyclable. According to the issuer, IDFM includes specifications in contracts with operators and suppliers, e.g., to use recycle material for batteries. According to the issuer, IDFM is compliant with the following national laws and Regulations where required: <ul style="list-style-type: none"> Complete transposition of the present directive by the Order of 27 June 2011 on end-of life vehicles certified centers networks set up by producers or group of producers in application of Article R. 543-156-1 of the environment code. Complement of the transposition of the present directive by the Decree No 2011-153 of 4 February 2011 containing various provisions of adaptation to community law in terms of end-of-life vehicles and electrical and electronic equipment wastes. Decree No 2003-727 of 1 August 2003 on the construction of vehicles and the elimination of end-of-life vehicles, Article 3: “A joint order from ministers of Transport, of the Ecological Transition and of Industry established the terms of use of lead, mercury, cadmium and hexavalent chrome in the components and materials of vehicles.” 	Likely aligned.
Pollution prevention and control	<ul style="list-style-type: none"> For road vehicles of categories M, tyres comply with external rolling noise requirements in the highest populated class and with Rolling Resistance Coefficient (influencing the vehicle energy efficiency) in the two highest populated classes as set out in Regulation (EU) 2020/740 of the European Parliament and of the Council¹⁹ and as can be verified from the European Product Registry for Energy Labelling (EPREL). 	<ul style="list-style-type: none"> According to the issuer, IDFM is compliant with the following national laws and Regulations where required: Order of 18 July 2019 on tyres, Article 1: The motor vehicles and their trailers as referred to in Annex II of the afore mentioned Directive 2007/46/CE must be equipped with tyres responding to the provisions of the present order and in accordance with: <ul style="list-style-type: none"> A type of Community type-approved tyres, in application of the aforementioned regulation (EU) No 458/2011 and Order of 6 October 1992 A type of type-approved tyres, in application of the afore mentioned regulations No 30 and No 117 or No 54 and No 117 (regulation UNECE No 117 establishing uniform prescriptions on tyres type-approval concerning rolling noise emissions and the wet grip and/or rolling resistance). 	Likely aligned.

¹⁹ Regulation (EU) 2020/740 of the European Parliament and of the Council of 25 May 2020 on the labelling of tyres with respect to fuel efficiency and other parameters, amending Regulation (EU) 2017/1369 and repealing Regulation (EC) No 1222/2009 (OJ L 177, 5.6.2020, p. 1)



	<ul style="list-style-type: none">Where applicable, vehicles comply with the requirements of the most recent applicable stage of the Euro VI heavy duty emission type approval set out in accordance with Regulation (EC) No 595/2009		
Protection and restoration of biodiversity and ecosystems	<ul style="list-style-type: none">N/A		N/A



Framework activity	Clean transportation		
Taxonomy activity	6.4 Operation of personal mobility devices (NACE Code N77.11 and N77.21)		
Taxonomy version	EU Technical mitigation criteria	Comments on alignment	Alignment
Mitigation criteria	<ul style="list-style-type: none"> The propulsion of personal mobility devices comes from the physical activity of the user, from a zero-emissions motor, or a mix of zero-emissions motor and physical activity. The personal mobility devices are allowed to be operated on the same public infrastructure as bikes or pedestrians. 	<ul style="list-style-type: none"> Under this category, IDFM mentioned that it will support the acquisition of electrically assisted bicycles and subsidies to individuals for the purchase of electrically assisted bicycles Véligo. According to the issuer, IDFM's vehicles (i.e., electrically assisted bicycles Véligo which can use the bike lanes in all cases) financed under the sub-category of Improving the quality of service for mobility, meet the TSC. The mitigation criteria of this taxonomy activity is not relevant for the other services financed under the sub-category "Improving the quality of service for mobility" (i.e., Improvement of passenger information, ticketing system, and accessibility (e.g.: for people with reduced mobility)). 	Likely aligned.
	EU Taxonomy DNSH-criteria	Comments on alignment	Alignment
Climate change adaptation	<ul style="list-style-type: none"> The activity complies with the criteria set out in Appendix A of the EU Taxonomy Annex. 	<ul style="list-style-type: none"> See comments on alignment for Climate Change Adaptation DNSH criteria for Taxonomy Activity 6.1 above. 	Likely aligned.
Sustainable use and protection of water and marine resources (water management)	<ul style="list-style-type: none"> N/A 		N/A
Transition to circular economy	<ul style="list-style-type: none"> Measures are in place to manage waste, in accordance with the waste hierarchy, both in the use phase (maintenance) and the end-of-life, including through reuse and recycling of batteries and electronics (in particular critical raw materials therein). 	<ul style="list-style-type: none"> For battery-operated devices, the issuer informs that manufacturers are required to take the batteries back at their end-of-life (7 to 10 years depending on the model of electric bus). The rate of recycling reaches 70 to 80% provided by a dedicated recycling branch. According to the issuer, IDFM includes specifications in contracts with operators and suppliers, e.g., to use recycle material for batteries. According to the issuer, IDFM is compliant with the following national laws and Regulations where required: <ul style="list-style-type: none"> - Complete transposition of the present directive by the Order of 27 June 2011 on end-of life vehicles certified centers networks set up by producers or group of producers in application of Article R. 543-156-1 of the environment code. Complement of the transposition of the present directive by the Decree No 2011-153 of 4 February 2011 containing various provisions of adaptation to community law in terms of end-of-life vehicles and electrical and electronic equipment wastes. 	Likely aligned.



		- Decree No 2003-727 of 1 August 2003 on the construction of vehicles and the elimination of end-of-life vehicles, Article 3: “A joint order from ministers of Transport, of the Ecological Transition and of Industry established the terms of use of lead, mercury, cadmium and hexavalent chrome in the components and materials of vehicles.”	
Pollution prevention and control	• N/A		N/A
Protection and restoration of biodiversity and ecosystems	• N/A		N/A



Infrastructure enabling low-carbon road transport

Framework activity	Clean transportation		
Taxonomy activity	6.15 Infrastructure enabling low-carbon road transport (NACE Code F42.11; F42.13; F71.1 and F71.20)		
Taxonomy version	EU Technical mitigation criteria	Comments on alignment	Alignment
Mitigation criteria	<ul style="list-style-type: none"> The activity complies with one or more of the following criteria: <ul style="list-style-type: none"> (a) the infrastructure is dedicated to the operation of vehicles with zero tailpipe CO2 emissions: electric charging points, electricity grid connection upgrades, hydrogen fuelling stations or electric road systems (ERS); (b) the infrastructure and installations are dedicated to transshipping freight between the modes: terminal infrastructure and superstructures for loading, unloading and transshipment of goods; (c) the infrastructure and installations are dedicated to urban and suburban public passenger transport, including associated signalling systems for metro, tram and rail systems. The infrastructure is not dedicated to the transport of fossil fuels 	<ul style="list-style-type: none"> Under this category, the issuer will support the renovation and renewal of infrastructures enabling low-carbon public transport, including Bus Operations Center under construction or existing Bus Operations Center under renovation According to the issuers, all IDFM's infrastructures (i.e., Bus Operations Center under construction or existing Bus Operations Center under renovation) financed under the sub-category of Renovation and renewal of infrastructures enabling low-carbon public transport to meet the technical mitigation criteria as the infrastructure is dedicated to low-carbon urban and suburban public passenger transport. 	Likely aligned.
	EU Taxonomy DNSH-criteria	Comments on alignment	Alignment
Climate change adaptation	<ul style="list-style-type: none"> The activity complies with the criteria set out in Appendix A of the EU Taxonomy Annex. 	<ul style="list-style-type: none"> See comments on alignment for Climate Change Adaptation DNSH criteria for Taxonomy Activity 6.1 above. 	Likely aligned.
Sustainable use and protection of water and marine resources (water management)	<ul style="list-style-type: none"> The activity complies with the criteria set out in Appendix B to this Annex. 	<ul style="list-style-type: none"> According to the issuer, IDFM is compliant with the following national laws and regulations where required: the European Water Framework Directive 2000/60/EC²⁰, transposed to Law no. 2004-338 of 21 April 2004²¹. According to the issuer, IDFM ensure compliance with these above laws and regulations by adhering to the HQE Infrastructure certification and by carrying environmental impact assessments that include water management. 	Likely aligned.
Transition to circular economy	<ul style="list-style-type: none"> At least 70 % (by weight) of the non-hazardous construction and demolition waste 	<ul style="list-style-type: none"> According to the issuer, IDFM is compliant with the following national laws and regulations where required: Article 79 of the Energy Transition Law for Green Growth 	Likely aligned.

²⁰ Directive 2000/60/EC of the European Parliament and of the C... - EUR-Lex (europa.eu)

²¹ EUR-Lex - L:2004:338:TOC - EN - EUR-Lex (europa.eu)



	<p>(excluding naturally occurring material defined in category 17 05 04 in the European List of Waste established by Commission Decision 2000/532/EC) generated on the construction site is prepared for re-use, recycling and other material recovery, including backfilling operations using waste to substitute other materials, in accordance with the waste hierarchy and the EU Construction and Demolition Waste Management Protocol ²². Operators limit waste generation in processes related construction and demolition, in accordance with the EU Construction and Demolition Waste Management Protocol and taking into account best available techniques and using selective demolition to enable removal and safe handling of hazardous substances and facilitate re-use and high-quality recycling by selective removal of materials, using available sorting systems for construction and demolition waste.</p>	<p>(LTECV) sets the State and local authorities a target of recovering at least 70% of the materials and waste produced on construction sites for which they are responsible (reuse, recycling or other material recovery) by 2020 in accordance with the 2008 European Framework directive on waste.</p> <ul style="list-style-type: none"> • According to the issuer, IDFM ensure compliance with these above laws and regulations by adhering to the HQE Infrastructure certification that includes these requirements. 	
Pollution prevention and control	<ul style="list-style-type: none"> • Where relevant, noise and vibrations from use of infrastructure are mitigated by introducing open trenches, wall barriers or other measures and comply with Directive 2002/49/EC. • Measures are taken to reduce noise, dust and pollutant emissions during construction or maintenance works 	<ul style="list-style-type: none"> • According to the issuer, IDFM is compliant with the following national laws and regulations where required: Directive 2002/49/EC is transposed in France by the following texts: Law No. 2005-1319 of 26 October 2005 on various provisions for adaptation to Community law in the field of the environment; Order No. 2004-1199 of 12 November 2004 adopted to transpose Directive 2002/49/EC of the European Parliament and of the Council of 25 June 2002 relating to the assessment and management of environmental noise; Decree 2006-361 of 24 March 2006 on the establishment of noise maps and environmental noise prevention plans and amending the urban planning code; Order of 3 April 2006 establishing the list of aerodromes mentioned in Article R.I. 147-5-1 the town planning code; Order of 4 April 2006 relating to the establishment of noise maps and environmental noise prevention plans. • According to the issuer, these requirements prescribed by the laws and regulations can be included in the tenders and/or contracts and can be investigated in environmental impact assessments. 	Likely aligned.
Protection and restoration of biodiversity and ecosystems	<ul style="list-style-type: none"> • As per Appendix D of the Annex: 	<ul style="list-style-type: none"> • The issuer mentioned that IDFM's projects are systematically or on a case-by-case basis inserted within the framework of the environmental assessment nomenclature of the Environment Code (annex to article R122-2 CE). 	Likely aligned.

²² Available at <https://ec.europa.eu/growth/content/eu-construction-and-d>



	<ul style="list-style-type: none"> - An Environmental Impact Assessment (EIA) or screening²³ has been completed, for activities within the Union, in accordance with Directive 2011/92/EU. For activities in third countries, an EIA has been completed in accordance with equivalent national provisions or international standards²⁴. - Where an EIA has been carried out, the required mitigation and compensation measures for protecting the environment are implemented. - For sites/operations located in or near biodiversity-sensitive areas (including the Natura 2000 network of protected areas, UNESCO World Heritage sites and Key Biodiversity Areas, as well as other protected areas), an appropriate assessment²⁵, where applicable, has been conducted and based on its conclusions the necessary mitigation measures²⁶ are implemented. • Where relevant, maintenance of vegetation along road transport infrastructure ensures that invasive species do not spread. • Mitigation measures have been implemented to avoid wildlife collisions. 	<ul style="list-style-type: none"> • The issuer informed us that environmental impacts assessments (EIAs) are carried out in the design phase of transport infrastructure and SMR (Rolling Stock Maintenance and Storage Site) projects and COB sites (operational bus center), to determine the possible presence of protected species. If protected species are present in the selected construction site, the ERC doctrine (Avoid, Reduce and Compensate) is implemented by the issuer in compliance with the regulations, with the goal to avoid and reduce the impacts on protected species and their habitats. In the event of a residual impact, environmental compensation measures are implemented according to the methods prescribed by the investigating services of the French State. • The issuer informed us that in the event where a project is not subject to environmental assessment, and if it has an impact on biodiversity, IDFM respects the principles of protection and exemptions relating to protected species (art. L411-1 of the CE). Reduction and compensation measures are then implemented within this framework. • IDFM mentioned respecting the following national and/or European regulations depending on the financed projects: <ul style="list-style-type: none"> - Directive 2011/92/EU was updated by Directive 2014/52/UE and was transposed by the following texts: Law No 2015-990 of 6 August 2015 for economic growth, activity and equal opportunities (Article 106); Decree No 2015-1614 of 9 December 2015 amending and simplifying the regime of classified facilities for the protection of the environment and on the risks prevention; Order No 2016-1058 of 3 August 2016 on the amendment of the rules applicable to the environmental assessment of projects, plans and programs; Decree No 2016-1110 of 11 August 2016 on the amendment of the rules applicable to the environmental assessment of projects, plans and programs; Order No 2016-1060 of 3 August 2016 on the procedures intended to ensure information and the public participation to the elaboration of some decisions that are likely to have an impact on the environment. Order 2017-80 of 26 January 2017 on the environmental authorization; Decree No 2017-626 of 25 April 2017 on the procedures intended to ensure information and the public participation to the elaboration of some decisions that are likely to have an impact on the environment, and amending several provisions on the environmental assessment of some projects, plans and programs; Order of 12 January 2017 establishing the form template of the “request for a case-by-case review” pursuant to Article R.122-3 of the environment code. 	
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²³ [The procedure through which the competent authority determines whether projects listed in Annex II to Directive 2011/92/EU is to be made subject to an environmental impact assessment \(as referred to in Article 4\(2\) of that Directive\).](#)

²⁴ [For example, IFC Performance Standard 1: Assessment and Management of Environmental and Social Risks.](#)

²⁵ [In accordance with Directives 2009/147/EC and 92/43/EEC, or, for activities located in third countries, in accordance with equivalent national provisions or international standards, for example IFC Performance Standard 6: Biodiversity Conservation and Sustainable Management of Living Natural Resources.](#)

²⁶ [Those measures have been identified to ensure that the project, plan or activity will not have any significant effects on the conservation objectives of the protected area.](#)



		<ul style="list-style-type: none">- Directive 92/43/EEC is transposed in France by the following texts: Decree No 2001-1216 of 20 December 2001 on the management of Natura 2000 sites and amending the rural code JORF of 21/12/01; Decree No 95-631 of 05/05/1995 on the conservation of natural habitats and habitats of wild species of Community interest OJ of 07/05/1995; Law no 95-101 of 02/02/1995 relating to the reinforcement of environmental protection OJ of 03/02/1995; Decree no 94-609 of 13/07/1994 implementing Law no 75-633 of 15/07/1975 relating to the elimination of waste and the recovery of materials and relating, in particular, to packaging waste whose holders are not households OJ of 21/07/1994; Decree no. 2000-190 L of 07/11/2000, downgrading of certain provisions of the environment code and the general code of local authorities JO of 10/11/2000; Order no. 2001-321 of 11 April 2001 relating to the transposition of Community directives and the implementation of certain provisions of Community law in the field of the environment JORF of 14/04/2001; Decree No 2001-1031 of 8 November 2001 relating to the procedure for designating Natura 2000 sites and amending the rural code JORF of 09/11/2001; Order of 16/12/2004 amending the Order of 17/4/1981 establishing the lists of protected mammals throughout the territory; Order of 16/12/2004 amending the Order of 22/7/1993 establishing the list of protected amphibians and reptiles throughout the territory; Order of 16/12/2004 amending the Order of 7/10/1992 establishing the list of protected molluscs within the metropolitan territory; Order of 16/12/2004 amending the Order of 22/7/21993 establishing the list of protected insects within the national territory; Order of 20/12/2004 on the protection of the Acipenser sturio species (sturgeon); Article 125 of Law no. 2010-788 of 12 July 2010 establishing a national commitment for the environment.- Directive 2009/147/EC, transposed into Decree No. 2020-612 of 19 May 2020 specifying the modalities for implementing the derogations provided for in Articles L. 424-2 and L. 424-4 of the Environment Code for the hunting of certain birds of passage.• Regarding the vegetation along road transport infrastructure, IDFM informed us that environmental impact assessments are carried out by IDFM during the construction phase according to the following process: diagnosis; management recommendation; eradication/proliferation avoidance monitoring. In the operational phase, it is the infrastructure managers who are responsible for the management of the surroundings.	
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Appendix 3: 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).

