



The French Railway Green Bond Programme

Green Bond Framework

Update of SNCF Réseau Climate Bond Framework

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1. Presentation

1.1 The 2018 French Railway Reform

The French railway reform voted on July 13, 2018 and implemented on January 1, 2020, aims to consolidate all of the SNCF Group's activities into a single integrated entity at par with other European integrated companies such as Deutsche Bahn (Germany) or Ferrovie dello Stato Italiane (Italy).

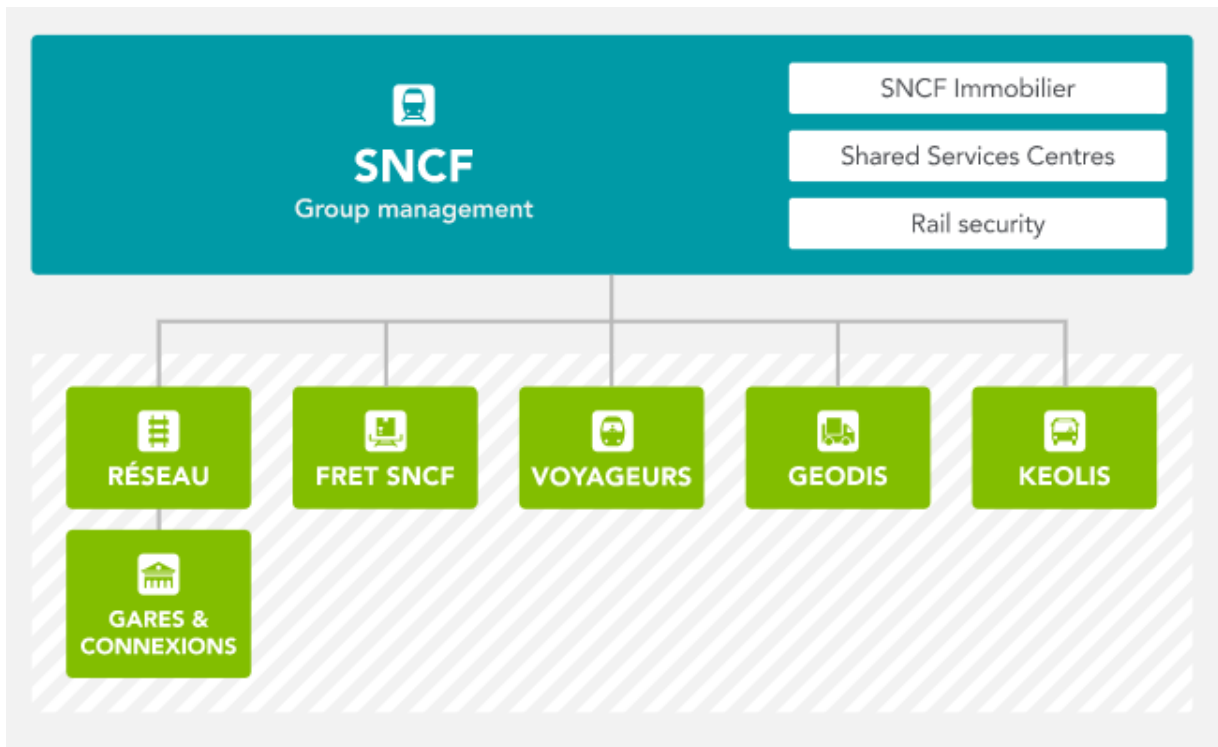
This new reform leads to four major transformations for the group:

1. A new governance and a new organization for the group:
 - a. All activities are gathered into a single vertically integrated group
 - b. Train station manager "Gares & Connexions" is transferred to SNCF Réseau
 - c. The 3 SNCF companies are all converted into SA (public limited company) with capital 100% (directly and indirectly) state-owned and non-transferable in order to ensure the independence of the corporate governance and new capitalistic links between the companies
2. A development of the rail offer through the opening to competition:
 - a. All passenger markets will progressively (from December 2019 to December 2039) be opened to competition in compliance with the 4th European Railway Package
 - b. Rail offer will be stimulated through tariffs moderation on High-Speed Lines and freight activities
3. A strengthened and more sustainable financial structure for the infrastructure (SNCF Réseau):
 - a. Higher productivity efforts will be encouraged at SNCF Group and SNCF Réseau levels
 - b. The French State will relieve SNCF Réseau by €35 bn in indebtedness in two steps (2020 & 2022)
 - c. The French State will increase the modernization effort in the railway infrastructure by injecting +€ 200 m per year from 2020 to 2025
 - d. A stronger Golden Rule has been proposed (6x) at SNCF Réseau's level
4. A social component:
 - a. The specific "Cheminot" employee status has ended for new employees hired from 2020 onwards

Société nationale SNCF SA becomes the holding company of the group and is in charge of the railway sector strategy, gathering all the mutualized functions (HR, strategy, communication, safety, audit, finance, etc...).

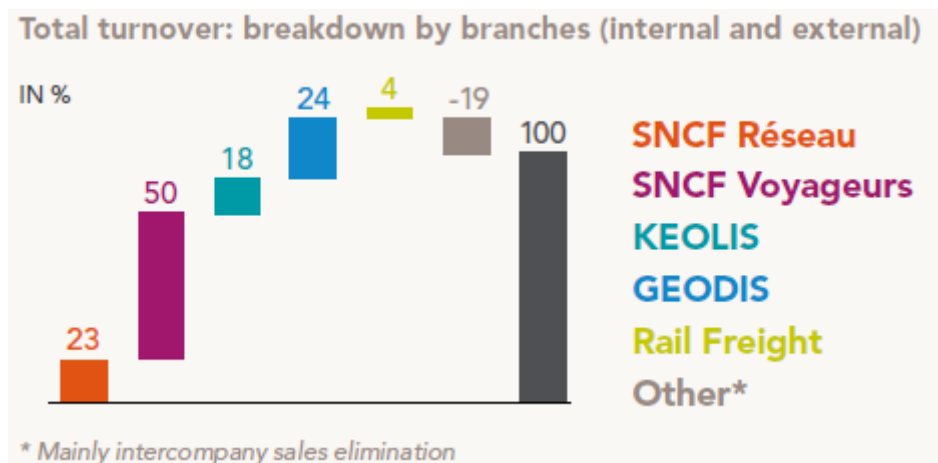
As part of the 2018 French Railway Reform, Société nationale SNCF SA will become the single issuing entity of the group, responsible for the financing of all the operating companies via intercompany loans.

All future Green Bonds will be issued from Société nationale SNCF SA.



1.2 Société nationale SNCF SA at a glance

- 270,000** employees worldwide
- €33.3 bn** in revenues in 2018 of which 1/3 derived from international markets
- €4.0 bn** in group EBITDA in 2018
- €5.1 bn** CAPEX financed on its own by SNCF Group
- 15,000** trains managed each day
- 30,000 km** of track, of which **2,700 km** of high-speed lines
- 1,000 km** of railway lines renovated annually
- 180,000 tons** of freight operated daily by Fret SNCF
- than 5 million** passengers per day in France
- 6 million** train paths granted each year



1.3 Group SNCF missions

SNCF group offers a full range of mobility solutions across multiple business lines¹.

To meet these challenges, SNCF group now has a new structure: a single parent company overseeing SNCF Réseau, SNCF Gares & Connexions, Fret SNCF, SNCF Voyageurs, Geodis and Keolis.

1.3.1 Société nationale SNCF SA

Société nationale SNCF SA, the parent company, provides top-level management and is home to the entities that provide services to the entire group:

- Support functions such as communication, strategy and finance departments
- Shared Services Centres, which support group operations by providing employee welfare, medical and payroll services, and more
- Rail Security (Suge), which protects passengers, property and personnel day in and day out, in stations and on trains throughout the French rail network
- SNCF Immobilier, which works with its S2FIT subsidiary to manage and optimize SNCF group's portfolio of tertiary, social, industrial and rail properties (other than stations and transport infrastructure); its Espaces Ferroviaires urban development subsidiary to improve and monetize land and buildings that are not used by the rail system; and its ICF Habitat subsidiary to manage group properties, by operating housing complexes and acting as a "social landlord"

1.3.2 SNCF Réseau SA

SNCF Réseau SA's primary goals are to manage, maintain and develop the French rail network, giving priority to existing lines and to the Greater Paris area in particular.

To fulfil these missions, the company is built around four core activities:

- providing access to France's rail network infrastructure, including allocating capacity and setting infrastructure fees
- managing network traffic
- maintaining and renovating infrastructure
- expanding and developing the network, with a focus on overall efficiency and optimum value.

1.3.3 SNCF Gares & Connexions SA

SNCF Gares & Connexions combines a wide variety of skills to achieve a single goal: renovating and improving the 3,000 stations on the French rail network. Gares & Connexions has three goals:

- modernize stations and transform them into destinations of choice at the heart of the transport network
- make railway stations convenient, useful and welcoming

¹ <https://www.sncf.com/en/group/profile-and-key-figures/about-us/who-we-are>

- manage 15,000 train departures and 10 million passengers every day in 3,000 stations across France

1.3.4 Fret SNCF

Fret SNCF (a société par actions simplifiée, or simplified public limited company, and a subsidiary of our parent company) is a leader in the French rail freight market. It is part of TFMM, a cluster of European rail & multimodal freight transport companies that is also owned by SNCF group. VFLI, VIIA, Naviland Cargo, Forwardis and Captrain are part of TFMM as well.

1.3.5 SNCF Voyageurs SA

SNCF Voyageurs provides passengers with shared and door-to-door mobility solutions that meet their needs in terms of offer, cost, service quality and environmental protection. Its services include the on-line travel agent OUI.sncf, France's leading e-commerce site. SNCF Voyageurs provides both commuter mobility and long-distance travel in France and Europe through:

- Voyages (long-distance travel with TGV INOUI, OUIGO, Intercités, Eurostar, Thalys, TGV Lyria, TGV INOUI & ICE France - Germany, TGV INOUI & AVE France - Espagne, TGV INOUI to Italy and Luxemburg)
- Transilien commuter rail
- TER regional rail

1.3.6 Geodis

Geodis specializes in freight transport logistics in France and 120 countries worldwide.

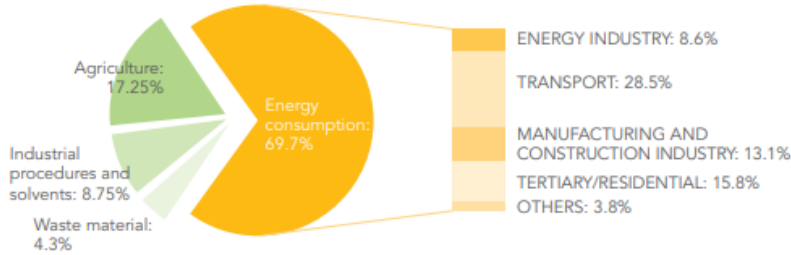
1.3.7 Keolis

Keolis is a private public transport operator with roots in France and Quebec. It operates bus, metro, light rail and coach networks, rental bikes, carparks, boat shuttles, cable cars, trolleybuses and airport services.

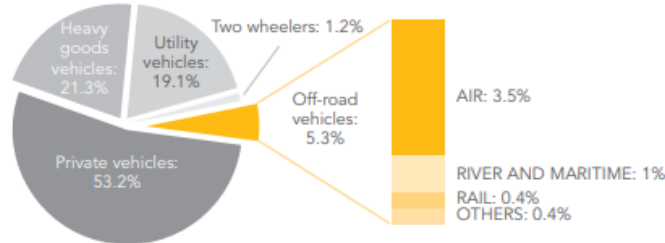
1.4 SNCF rationale to issue a Green Bond

Railway transport is a key contributor in the fight to reduce Greenhouse Gases emissions as it emits less than 1% of total CO₂ emissions in France in the transportation system, while transporting 10% of passengers and freight.

BREAKDOWN PER SOURCE OF GHG EMISSIONS (EXCLUDING LULUCF¹) IN FRANCE IN 2014

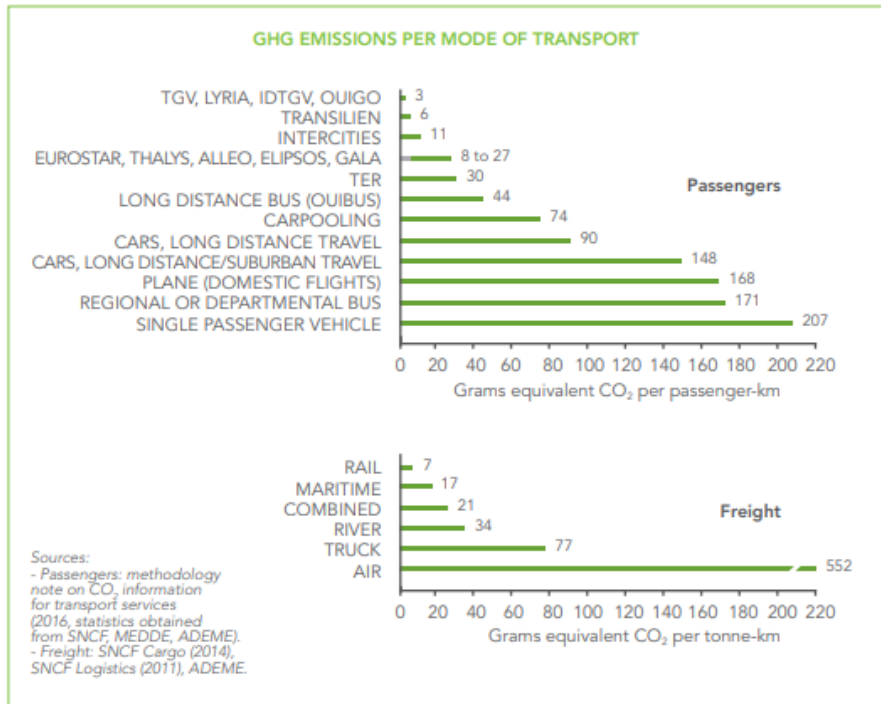


GHG EMISSIONS PER MODES OF TRANSPORT IN FRANCE AS A % (INCLUDING FOD)



Source: Citepa, June 2016

1. LULUCF: Land use, Land Use Change and Forestry.



SNCF is encouraging several initiatives in favor of the green transition of the transportation industry:

- By promoting new sources of energy:
 - Deployment of hybrid trains (regional TER)
 - Electric mobility powered by agro-fuels
 - Deployment of hydrogen trains by 2022
 - End of diesel trains by 2035
 - Higher share of electricity energy sourced from alternative renewable producers

- By improving the quality of our assets:
 - Continuous improvement of our rolling stock
 - High quality certification (HQE) for the new SNCF train stations
 - Smart braking and automatic engine start-stop system on high speed trains (TGV INOUI) helping to reduce fuel consumption by up to 12%
 - Recovery of braking energy as a way to power a train station or a small district

- By promoting all forms of shared motilities and mass transit motilities:
 - **SNCF Voyageurs SA:** by increasing railway capacity and investing in new cleaner rolling stock
 - **Keolis:** by developing bus fleet operating on natural gas (Tours, Loire Valley) and electric mobility (Orléans metropolis), 100% electric school buses (Canada)
 - **Geodis – rail freight activities:** by promoting cleaner freight solutions and alternatives

More specifically, many initiatives are particularly developed on SNCF Réseau perimeter. Indeed, SNCF Réseau is taking two major types of actions to encourage travelers to use railway transport rather than road transport (modal shift):

- making railway transport more attractive by continually improving the quality of train paths (i.e. rail traffic units along a specific route at a given time), to meet all customer needs.
- increasing railway capacity (e.g. by having longer freight trains).

In addition, SNCF Réseau SA is carrying out a major renovation program of its railway network to ensure the safety of passengers and merchandise, traffic security and the safety of all people using level and pedestrian crossings.

Finally, SNCF Réseau SA has initiated an ISO 14001 certification approach for its industrial sites and set up an adapted Environmental Management System (EMS) for its other entities.

The environmental impact of its railway projects is measured by carbon assessments, and SNCF Réseau SA is aiming to optimize the use of natural resources and recycle railway products as part of its circular economy policy.

For SNCF Réseau SA, the maintenance and modernization of its current infrastructure is an absolute priority. A total of €5.1 billion has been invested in 2018 with 68% of that amount spend on productivity safety, quality and renewal and 32% spent on network development.

2. Green Bond Framework

This Green Bond Framework has been created to facilitate transparency, disclosure, integrity and quality of Société nationale SNCF SA Green Bond issues. This framework is in alignment with the Green Bond Principles of June 2018 (GBP) and the Climate Bond Initiative Low Carbon Transportation standard.

This framework is more basically the heir of the former SNCF Réseau's Green Bond Framework.

Société nationale SNCF SA Green Bond will follow the four components as described by the GBP: Use of Proceeds, Process for Project Selection, Management of Proceeds and Reporting.

2.1 Use of Proceeds

An amount equal to such net proceeds will be allocated for investments in one or more of the "Eligible Green Projects".

As Green Bonds will be raised from Société nationale SNCF SA (sole issuing company), the proceeds will be allocated to SNCF Group's subsidiaries eligible projects through an intragroup loan mechanism.

In compliance with the formerly existing methodology developed by SNCF Réseau and Carbon 4 all eligible assets are, so far, located at SNCF Réseau SA's level. Hence, at first, all the financial proceeds will be allocated to SNCF Réseau SA's eligible assets.

May SNCF Group decide to enlarge its framework to additional activities and subsidiaries, a specific carbon methodology would first be set up to take into account these new projects and the Green Bond framework would be completed accordingly.

Eligible Green Projects include new and ongoing projects with disbursements within the past two years (look-back period). Allocation of the excess funds to eligible projects must occur in a delay no longer than two years forward (look-forward period).

"Eligible Green Projects" include SNCF Réseau SA's capital expenditures:

- Investments related to maintenance, upgrades and energy efficiency of the rail system
- Investments related to new rail lines and rail lines extensions which ensure access to the network and the efficient movement of people and freight
- Other Investments linked to the global climate change challenges, the protection of biodiversity and natural resources*

*Note: Société nationale SNCF SA expects the majority of the allocation to the first two eligible green project categories. The inclusion of other investments linked to the protection of biodiversity and natural resources is essential to Société nationale SNCF SA's overall environmental and sustainability strategy.

2.1.1 Example of Eligible Green Projects

Below you can find some examples of Eligible Green Projects ordered in three categories:

1. Investments related to maintenance, upgrades and energy efficiency of the rail system:

This category includes projects associated with SNCF Réseau SA's efforts to ensure the efficiency of the rail system and promote a low carbon mass transportation, throughout its various worksites. Typology of worksites could be: path, catenary or signaling system regeneration, capacity enhancement project, electrification of a railway line...

More information on SNCF Réseau's website:

- **Worksite map 2020:**
 - https://www.sncf-reseau.com/sites/default/files/2019-12/ Carte%20nationale%20des%20chantiers_2020_584x410_%20FRANCE_v3.pdf
- **Greater Paris area worksite map 2020:**
 - https://www.sncf-reseau.com/sites/default/files/2019-12/BAT2%20chantiers_2020_584x410_%20IDF_v11.pdf

Major worksite 2020

Between 1600 and 1650 projects

Blue:	Path worksite, including high-output track replacement units (in order to reduce the railway age)
Brown:	Signaling system installation (to manage the train traffic)
Purple:	Development project
Green:	Switches and controlling signal boxes
Yellow:	Civil engineering infrastructure made with land
Orange:	Technology project as ERTMS system (optical fiber GSM-RAIL)
Red:	Catenary regeneration to improve the electrification on the line
Pink:	Station
Light blue:	Adaptation of the infrastructure to new trains
Dark blue:	Electrical substation
Brown point:	Level crossing

Most of the worksites on the map are more than 1 million of euros investment

Major worksite 2019 in Paris Greater area

Between 1600 and 1650 projects

Blue:	Path worksite, including high-output track replacement units (in order to reduce the railway age)
Brown:	Signaling system installation (to manage the train traffic)
Purple:	Development project
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Red:	Catenary regeneration to improve the electrification on the line
Blue point :	Electrical substation
Brown point:	Level crossing
Pink point:	Station

Most of the worksites on the map are more than 1 million of euros investment

2. Investments related to new rail lines and rail lines extensions which ensure access to the network and the efficient movement of people and freight:

This category includes projects for the rail development which are already put into service or expected high-speed line.

3. Other Investments linked to the global climate change challenges, the protection of biodiversity and natural resources:

This category will include projects which ensure the inclusion of the protection of biodiversity and natural resources in the management approach of the existing railway network and in development projects.

- Conservation of biodiversity and the quality of natural environments:
 - <https://www.sncf-reseau.com/fr/entreprise/newsroom/sujet/preserver-biodiversite>
- Circular economy and recycling of disposed products:
 - <https://www.sncf-reseau.com/en/entreprise/newsroom/sujet/ecodesign>
- Fight against climate change:
 - <https://www.sncf-reseau.com/en/entreprise/newsroom/sujet/green-bonds-sncf-reseau-pioneers>

Examples are intended for illustrative purposes only and no assurances can be provided that disbursements for projects with these specific characteristics will be made by SNCF Réseau SA.

2.2 Selection Process

Société nationale SNCF SA's Treasury and Funding Department in coordination with SNCF Réseau SA's Accounting & Management Control and Sustainable Development Departments will review the allocation of the projects annually.

Projects that are aligned with the Use of Proceeds identified in section 2.1 above will be considered for eligible green bond proceeds allocation.

If projects are considered eligible, they will be recorded in the Société nationale SNCF SA's Green Bond Register and tracked for the life of the involvement in the Green Bond.

SNCF Réseau SA's Sustainable Development will complete the annual reporting.

2.3 Management of Proceeds

Pending allocation of an amount equal to the net proceeds from the sales of the Notes to Eligible Green Projects, the proceeds from the Green Bond will be placed into Société nationale SNCF SA's treasury accounts. Société nationale SNCF SA's Treasury will allocate, via intercompany loan, the bond proceeds from the Treasury to projects recorded in the Green Bond Register. The Register will include a full list of eligible projects (as approved in the Process for Project Selection and Evaluation section), and the amount of allocation made. Whilst any bond proceeds remain unallocated, they will be invested in accordance with Société nationale SNCF SA's liquidity management policies and guidelines in money market products, such as cash and/or cash equivalents and/or bank deposits.

Payment of principal and interest of the Notes will be made from our general funds and will not be directly linked to the performance of the Eligible Green Projects.

With respect to above-mentioned use of proceeds section (2.1), all the net proceeds will ultimately be allocated to the identified eligible Green Projects and so long as the Green Bonds are outstanding, the balance of the tracked net proceeds will be periodically adjusted to match allocations to the eligible Green Projects.

Use and management of proceeds will be verified, ex post, by an auditing company (currently KPMG France).

2.4 Reporting

Within the calendar year that follows the issuance, and until the full allocation of an amount equal to the net proceeds of the Green Bonds issued, Société nationale SNCF SA will provide to investors (i) annual updates on website (<https://www.sncf.com>) on the amounts allocated to the Eligible Green Projects, (ii) relevant expected impact metrics and where feasible actual impact metrics, related to the Eligible Green Projects where competition and confidentiality reasons allow. (iii) Auditors or any other third party appointed by Société nationale SNCF SA, will issue an annual report on Société nationale SNCF SA's compliance in all material respects with the Eligible Green Project criteria set forth in these documents.

Examples of relevant metrics could include:

1. Investments related to maintenance, upgrades and energy efficiency of the rail system

- Total GHG emissions of the maintenance project called high-output track replacement units (tCO₂eq)
- Estimated FTE's creation on the maintenance site
- Age of the railway by type of railway
- Volume of wooden sleepers recycled for energy purposes (tons)
- Share of ballast re-used on the maintenance project (tons)
- Share of concrete sleepers recycled from the maintenance project (tons)
- Share of re-used rails from the maintenance project (tons of steel)

2. Investments related to new rail lines and rail lines extensions which ensure access to the network and the efficient movement of people and freight

- Total GHG emissions of the project (tCO₂eq)
- Modal shift: Number of passenger or goods transferred to the train
- Total GHG emissions avoided because of the project (tCO₂eq)
- Estimated FTE's creation on the construction site
- Estimated average time saving because of the project (min)

3. Other investments linked to the global climate change challenges, the protection of biodiversity and natural resources

Currently, most of the metrics are not yet available in this category and investments are too numerous and/or granular to be allocated yet. Examples of impact metrics are intended for illustrative purposes only and no assurances can be provided that these exact metrics will be provided. Relevant impact metrics will be provided and may/will differ depending on the type of project.

3. Second Opinion

Société nationale SNCF SA has appointed a “Second Opinion Provider” to assist the finalization of the Green Bond Framework, which will sum up the main extra-financial features of the potential future transaction and will provide a “Second Party Opinion” on this framework.

The objective of the Second Party Opinion is to provide investors an independent accurate assessment on the alignment of the framework with the GBP in accordance with the CSR policy of Société nationale SNCF SA.

The Second Opinion will be provided by ISS-ESG research.



4. Climate Bond Certification

Société nationale SNCF SA has appointed ISS ESG research to act as a verifier for obtaining a Climate Bond Initiative Certification.

The Climate Bond Initiative certification will be related to the Low-Carbon Transportation Standard.

