



Verification of the Sustainability Quality of the Green Bond Programme launched by SNCF Réseau

6 October 2016

Aim and Scope of this Second Party Opinion

The French railway infrastructure owner and manager SNCF Réseau has decided to launch a Green Bond Programme with an inaugural Green Bond issuance in the fourth quarter of 2016. The aim of the Green Bond issuance, based on the Programme, is to finance and refinance assets in the field of low carbon rail transportation covering three areas:

- Investments in maintenance, upgrade and energy efficiency of the rail grid
- Investments in the creation of new railway lines and the extension of existing ones
- Investments in climate change adaptation and biodiversity protection projects and/or initiatives

All assets included in the current asset pool are electrified railway lines only.

SNCF Réseau commissioned oekom research to assist with the issuance of its Green Bonds by verifying and confirming the sustainable added value of a pool of assets to be financed by these bonds. The verification is conducted using the criteria and indicators of a sustainability framework concept.

oekom research's mandate included the following services:

- Definition of a Green Bond Verification Framework containing a clear description of eligible project categories and the social and environmental criteria attributed to each category for evaluating the sustainability-related performance of the projects financed through the proceeds of the bonds issued under the Green Bond Programme.
- Verification of compliance of the asset pool with the Green Bond Verification Framework criteria.
- Verification of the alignment of internal Green Bond governance procedures with the Green Bond Principles.
- Review and classification of SNCF Réseau's sustainability performance on the basis of the oekom Corporate Rating.

In principle, this Second Party Opinion will stay valid for a period of three years. However, every year following the initial issuance in the fourth quarter of 2016, oekom will carry out an additional verification and update the different parts of the Second Party Opinion. In particular, the asset pool will be re-verified if new projects will have been added. In addition, the issuer's sustainability evaluation will be updated.

Overall Evaluation of the Green Bond Programme

oekom's overall evaluation of the Green Bond to be issued by SNCF Réseau is positive:

- The Green Bond's formal concept, defined processes and (announced) disclosures are aligned with the Green Bond Principles (Part I of this Second Party Opinion).
- The overall sustainability quality of the bond and the sustainability performance of all funded assets in terms of sustainability benefits and risk avoidance and minimisation is good (Part II of this Second Party Opinion). In particular, the assets represent high benefits concerning the fight against climate change and also from a social perspective (transport safety, connection of rural areas and transportation for people that don't own cars). Concerning the management of sustainability risks, these are all well covered by suited measures. In addition, all projects selected for the Green Bond Programme are located in France, a highly regulated and developed country.
- The issuer itself shows a relatively good sustainability performance (Part III of this Second Party Opinion). SNCF Réseau was granted a "Prime" rating by oekom research and shows a very low level of controversy.

There are some minor aspects that could add to the overall quality of future Green Bond issuances, in particular the implementation by SNCF Réseau of grievance mechanisms and compensation schemes of communities in its standard procedures.

The annual updates of this Second Party Opinion carried out by oekom research will provide information and assessments of the sustainability quality of all future Green Bond issuances under SNCF Réseau's Green Bond Programme.

Part I – Green Bond Principles

1) Use of Proceeds

SNCF Réseau will use an amount equal to the net proceeds to finance and refinance investments in projects belonging to the "Eligible Green Projects" categories defined by SNCF Réseau. Eligible Green Projects according to SNCF Réseau include new and on-going projects with disbursements within the past two years in which the Green Bonds are issued until the maturity of the Green Bonds.

"Eligible Green Project" categories as defined by SNCF Réseau are as follows:

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

For the first Green Bond Issuance in the fourth quarter of 2016, SNCF Réseau has only selected assets under the first two categories A and B, as shown in the table below displaying the projections¹ of assets. While category C will probably cover only minor budgets, SNCF Réseau is aiming at developing this category in the future and include these in future Green Bond issuances under the current Programme.

Project Category	Asset Pool 2016		Projection 2017		Projection 2018		Projection 2019	
	€ ²	Nb ³	€	Nb	€	Nb	€	Nb
A Maintenance, upgrades and energy efficiency	2456	1 772	2 645	1 915	2 744	1 855	2 844	1 813
<i>Path</i>		255		275		267		338
<i>Major maintenance operations</i>		855		887		752		480
<i>Signalling system installation (to manage the train traffic)</i>		105		149		176		240
<i>Civil engineering infrastructure made with land</i>		192		231		272		328
B New rail lines and rail lines extensions (including high-speed lines and regional projects)	414	61	287	49	234	31	203	36

From a sustainability point of view, oekom research considers all three project categories to be positive.

2) Process for Project Evaluation and Selection

The selection of projects for inclusion in the asset pool is carried out by SNCF Réseau internally. The Eligible Green Project Criteria have been submitted to the Climate Bond Initiative for certification under the Climate Bonds Standards. SNCF Réseau's Treasury and Funding Department will allocate the projects annually in coordination with the Accounting and the Environment and Sustainable Development Departments. The Environment and Sustainable Development Department will carry out the annual reporting.

3) Management of Proceeds

Pending allocation of an amount equal to the net proceeds from the sales of the Green Bonds to Eligible Green Projects, SNCF Réseau will temporarily invest an amount equal to the net proceeds from the sales of the Green Bonds in monetary funds managed following a responsible investment approach, bank deposits, cash, and/or cash equivalents. Payment of principal and interest of the Notes will be made from SNCF Réseau's general funds and will not be directly linked to the performance to the Eligible Green Projects.

¹ All numbers have to be considered very carefully and may not be regarded as final figures.

² All amounts are expressed in millions of euros

³ These figures are the numbers of projects per subcategory

4) Reporting

SNCF Réseau commits itself to provide annual updates within one year of the issuance, and until the full allocation of an amount equal to the net proceeds of the Green Bonds to the project categories. These reports will be available on SNCF Réseau's investor relations website⁴ and will include information on the amounts allocated to the project categories.

SNCF Réseau plans to report relevant expected impacts and where feasible actual impact related to the project categories. SNCF Réseau proposes the impact reporting could include the following indicators:

- A. 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 (tCO₂e)
 - 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)

- B. 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 (tCO₂e)
 - Modal shift: Number of passenger or goods transferred to the train
 - Total GHG emissions avoided because of the project (tCO₂e)
 - Estimated FTE's creation on the construction site
 - Estimated average time saving because of the project (min)

- C. Other investments linked to the global climate change challenges and the protection of biodiversity and natural resources**
 - None defined so far.

Additionally, SNCF Réseau plans to have an annual verification carried out by an auditor or any other third party appointed by SNCF Réseau.

Part II – Sustainability Quality of the Green Bond

1) Green Bond Verification Framework

The Green Bond Verification Framework as defined by oekom is used to illustrate the sustainability quality and thus the social and environmental added value of SNCF Réseau's Green Bond issuances. The Verification Framework clearly defines the eligible categories and encloses specific sustainability criteria in order to verify the sustainability performance of the Green Bond. Using quantitative indicators allows to measure the sustainability performance of the bonds, to set ambitious targets

⁴ <http://www.sncf-reseau.fr/en>

and to report on progress. In addition, impact indicators provide investors with concrete information on environmental added value.

Since the assets included in SNCF Réseau's Green Bond Programme are very similar from a technical and sustainability point of view, oekom has defined only one project category for its verification: "Public transport infrastructure". Details on the individual criteria and indicators for this project category can be found in Annex 1 „Green Bond Verification Framework“.

2) Verification of Projects Financed by the Green Bond

Methods

Through this Second Party Opinion, oekom research has verified whether the projects to be funded through SNCF's Green Bonds are aligned with the criteria established in the Green Bond Verification Framework.

The verification was carried out using information and documents provided to oekom research, partly on a confidential basis, by SNCF Réseau (e.g. Railponsible Ciblage, Websites dedicated to projects, Purchasing policy for SMEs, Sustainable Purchasing Policy). Further national legislation and standards as well as information from oekom research Corporate Ratings were drawn on to complement the information provided by SNCF Réseau.

The verification below applies to each of the two categories A and B as defined in SNCF Réseau's Framework. All projects and/or activities that have been included in the 2016 asset pool have been verified.

Findings

Sustainability Benefits and Risks of Projects in the Eligible Use of Proceeds Category

The construction of public rail transport infrastructure is positive from an environmental point of view as it helps to foster climate protection through lower carbon emissions and optimised transport efficiency when compared to individual mobility, in particular individual road transport as well as when compared to air transport. From a social point of view, construction of additional rail transport infrastructure may contribute to enhanced mobility of the population of remote or rural areas and for those not owning or not able to drive cars. Rail infrastructure maintenance activities are important to improve and/or maintain safety of rail operations.

At the same time, when evaluating public transport projects, certain risks have to be taken into account. Major risks from an environmental point of view stem from the potential negligence of environmental impacts during construction and operation. Social risks concern the health and safety of workers at construction sites, transport safety as well as stakeholder involvement during planning and construction phases.

All projects selected for the Green Bond are located in France, a highly-regulated and developed country.

SNCF Réseau's Project Categories	Inclusion in asset pool	Percentage of volume in this project category
A. Maintenance, upgrades and energy efficiency	2016	67%*
B. New rail lines and rail lines extensions	2016	33%*
C. Other investments	2016	0%*

* The allocation is an estimate and subject to change as projects develop

- 1. Consideration of environmental impacts during planning

Category A: Maintenance, upgrades and energy efficiency

- ✓ SNCF Réseau undertakes environmental impact assessments for rail projects, including maintenance, upgrade and energy efficiency projects.
- ✓ None of the projects are located in key biodiversity areas such as Ramsar sites or UNESCO Natural World Heritage Sites (provided for by national legislation).
- ✓ All projects meet high environmental standards during the construction phase (compliance with French environmental law, ISO 14001 and ISO 9001 standards).

Category B: New rail lines and rail line extensions

- ✓ For 3 out of the 4 high-speed railway projects, environmental impact assessments have been conducted (i.e. assessments including the consideration of all relevant natural goods). For the one remaining high-speed project, the environmental impact assessment is currently underway. For the extension of the regional line RER E (EOLE project), the environmental impact assessment will be conducted at a later stage.
- ✓ None of the projects are located in key biodiversity areas such as Ramsar sites or UNESCO Natural World Heritage Sites (provided for by national legislation).
- ✓ All projects meet high environmental standards during the construction phase (e.g. compliance with the French environmental law, ISO 14001 and ISO 9001 standards; disposal of hazardous waste, noise limits).

- 2. Community dialogue

- ✓ For 100% of the projects, surveys and dialogues platforms, community advisory panels and committees are in place and communities are informed about sound pollution.
- No information is available on grievance mechanisms and compensation schemes of communities.

- 3. Working conditions during construction, operation and maintenance

- ✓ For all projects, high labour standards regarding e.g. working time, periods of rest, minimum wages, freedom of association and collective bargaining are provided by national legislation.
- ✓ For all projects, high standards regarding health and safety for both own employees and contractors are provided by national legislation.

- 4. Transport safety
 - ✓ For all projects, a comprehensive transport safety management system is in place (including e.g. risk assessments, monitoring, training programmes, emergency management).

- 5. Social aspects of train services
 - ✓ For all projects, the accessibility for all user groups is ensured (e.g. through barrier-free access to platforms, assistance services).

- 6. Environmental aspects of public transport infrastructure
 - ✓ For all projects, measures to optimise energy efficiency are in place (e.g. computer aided train operation, passenger load factor monitoring).
 - ✓ All projects are located in France where maximum noise levels regarding train services are in place. Additionally, specific measures to reduce transport-related noise emissions are in place (e.g. sound barriers along tracks, low-noise tracks).
 - ✓ For all projects, SNCF Réseau guidelines ensure environmentally friendly disposal of components (e.g. removal of hazardous materials, recycling, re-use).

- 7. Social standards in the supply chain
 - ✓ For all projects, SNCF Réseau's purchasing policy applies, in which SNCF Réseau refers to the ILO core conventions in the supply chain.

Controversy assessment

- oekom's controversy assessment on the included projects did not reveal any controversial activities or practices that could be attributed to SNCF Réseau.

Quantitative impact reporting

- For the initial Green Bond issuance under its Programme SNCF Réseau has not yet reported on quantitative impacts. This will be done and verified by oekom on an annual basis starting in the fourth quarter of 2017.

Part III – Assessment of SNCF Réseau's Sustainability Performance

In the oekom Corporate Rating with a rating scale from A+ (excellent) to D- (poor), SNCF Réseau was awarded a score of C+ and classified as "Prime". As at 5 October 2016, this rating puts SNCF Réseau in place 5 out of 44 companies rated by oekom research in the Transportation Infrastructure sector. SNCF Réseau's rating result means that the company performed well in terms of sustainability, both compared against others in the industry and in terms of the industry-specific requirements defined by oekom research. In oekom research's view, the securities issued by the company thus all meet the basic requirements for sustainable investments.



In the Transportation Infrastructure sector, oekom research has identified the following issues as the key challenges facing companies in term of sustainability management:

- Reduction of air emissions
- Worker health and safety and product safety
- Biodiversity conservation and use of land
- Reduction of transport-related noise emissions
- Stakeholder dialogue

In all five key issues, SNCF Réseau achieved a rating that was above the average for the sector. A very significant outperformance was achieved in "Biodiversity conservation and use of land" and "Reduction of transport-related noise emissions".

In recent years, the company was not involved in any controversies in the areas of controversial business practices or controversial areas of business, and thus does not breach any of the exclusion criteria, which are frequently applied by investors.

Details on the rating of the issuer can be found in Annex 2 "oekom Corporate Rating of SNCF Réseau".

A handwritten signature in blue ink, appearing to read "J. Geyer", written over a light-colored rectangular stamp.

oekom research AG

Munich, 6 October 2016

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About oekom research

oekom research is one of the world's leading rating agencies in the field of sustainable investment. The agency analyses companies and countries with regard to their environmental and social performance. oekom research has extensive experience as a partner to institutional investors and financial service providers, identifying issuers of securities and bonds which are distinguished by their responsible management of social and environmental issues. More than 100 asset managers and asset owners routinely draw on the rating agency's research in their investment decision making. oekom research's analyses therefore currently influence the management of assets valued at over 600 billion euros.

As part of our Green Bond Services, we provide support for companies and institutions issuing sustainable bonds, advise them on the selection of categories of projects to be financed and help them to define ambitious criteria. We verify the compliance with the criteria in the selection of projects and draw up an independent second party opinion so that investors are as well informed as possible about the quality of the loan from a sustainability point of view.

Contact: oekom research AG, Goethestraße 28, 80336 Munich, Germany, tel: +49 / (0) 89 / 54 41 84-90, e-mail: info@oekom-research.com

Annex

- Annex 1: oekom Green Bond Verification Framework
- Annex 2: oekom Corporate Rating of SNCF Réseau

Annex 1: Green Bond Verification Framework

Green Bond Verification Framework

The Green Bond Verification Framework serves as a structure for verifying the sustainability quality – i.e. the social and environmental added value – of the Green Bond asset pool. It comprises firstly the definition of the use of proceeds category offering added social and/or environmental value and secondly the specific sustainability criteria by means of which this added value and therefore the sustainability performance of the Green Bond asset pool can be clearly identified and verified.

The sustainability criteria are complemented by specific indicators, which enable quantitative measurement of the sustainability performance of the Green Bonds and which can be used for comprehensive reporting.

Use of Proceeds

The Green Bond proceeds under SNCF Réseau' Programme will be exclusively used for financing and refinancing public rail transport infrastructure projects. The issuer has defined the following "Eligible Green Project" categories:

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

For the purpose of verifying the sustainability quality of all assets, oekom research has chosen the following project category: public transport infrastructure.

Sustainability Criteria and Quantitative Indicators for Use of Proceeds

In order to ensure that the environmental and social risks linked to the financed and refinanced projects are prevented and the opportunities clearly fostered, a set of sustainability criteria has been established for the selected project category. One or more quantitative indicators, allowing for measurement of progress and regular reporting, complete each criterion.

1. Consideration of environmental impacts during planning (only applicable for infrastructure construction)

- Percentage of funds allocated to projects that underwent environmental impact assessments at the planning stage.
- Percentage of loans allocated to projects for which the location in key biodiversity areas can be excluded (e.g. exclusion of Ramsar sites, UNESCO Natural World Heritage, IUCN protected areas I-IV).
- Percentage of funds allocated to projects that meet high environmental standards and requirements during the construction phase (e.g. minimisation of environmental impact during construction work).

2. Community dialogue (only applicable for infrastructure construction)

- Percentage of funds allocated to projects that feature community dialogue as an integral part of the planning process and construction phase (e.g. sound information of communities, community advisory panels and committees, surveys and dialogue platforms, grievance mechanisms and compensation schemes).

3. Working conditions during construction and maintenance

- Percentage of funds allocated to projects with high labour and health and safety standards during the construction phase and for maintenance work conducted by own employees and contractors (e.g. ILO core conventions).

4. Transport safety

- Percentage of funds allocated to projects that have a transport safety management system in place (i.e. policies, responsibilities, risk assessments and monitoring, training, emergency management).

5. Social aspects of public transport infrastructure

- Percentage of funds allocated to projects for which the accessibility for all consumer groups is ensured (e.g. through assistance services, barrier-free access to platforms)

6. Environmental aspects of public transport infrastructure

- Percentage of funds allocated to projects for which measures to reduce transport-related air emissions are in place (not applicable for electric services).
- Percentage of funds allocated to projects for which measures to optimise energy efficiency are in place for network operation (e.g. computer aided train operation, passenger load factor monitoring, energy efficient lighting at train stations).
- Percentage of funds allocated to projects for which measures to reduce transport-related noise emissions are in place (e.g. low-noise tracks, route optimisation, sound barriers along tracks).
- Percentage of funds allocated to projects for which guidelines regarding environmentally responsible disposal are in place (e.g. removal of hazardous materials, dismantling, recycling).

7. Social standards in the supply chain

- Percentage of funds allocated to projects for which high labour and health and safety standards are applied in their supply chain (e.g. ILO core conventions).

Controversies

- Controversy screening and description of controversial projects (e.g. due to labour rights violations, environmental accidents, adverse biodiversity impacts).

Suggested quantitative impact indicators:

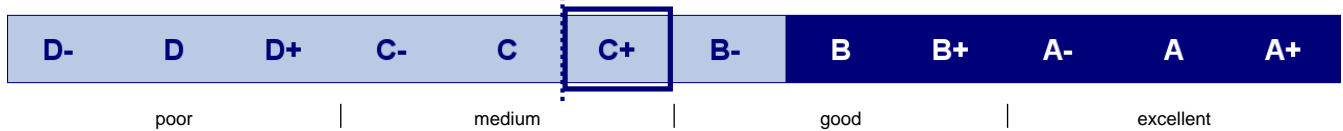
- Potential avoidance of CO₂ emissions per year through newly built railways if 100% of transport capacity is used (compared to the carbon intensity of road-based transportation in France).
- CO₂ emissions avoided through the operation of newly built railways (compared to the carbon intensity of road-based transportation in France, and based on passengers/ freight transported).

oekom Corporate Rating

SNCF Réseau

Industry: Transportation Infrastructure
 Country: France
 ISIN: XS0497367465

Status: **Prime**
 Rating: **C+**
 Prime Threshold: **C+**



Company Profile

SNCF Réseau (formerly Réseau Ferré de France) is a public establishment of an industrial and commercial nature ('EPIC'). The company owns and manages the French rail network, and is responsible for upgrading, developing, and enhancing the network whilst guaranteeing its overall coherence. In December 2014, within the framework of the French rail reform, the holding company SNCF Group was created as a result of a merger of SNCF and Réseau Ferré de France. The two former companies operate as two entities under the new holding: SNCF Mobilité and SNCF Réseau. The latter, SNCF Réseau, took over the functions of Réseau Ferré de France.

Competitive Position

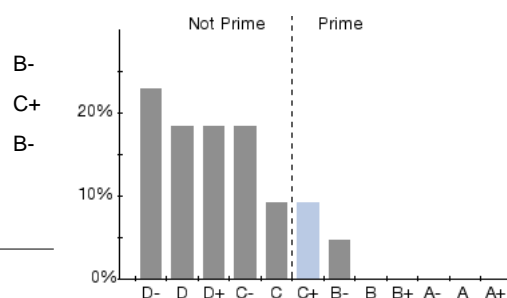
Industry Leaders

(in alphabetical order)

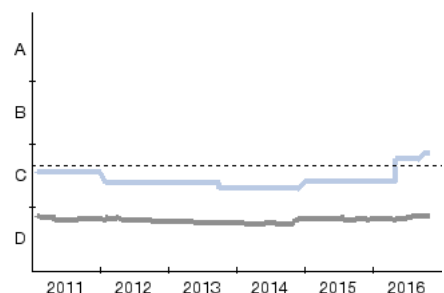
- Fraport AG Frankfurt Airport Services Worldwide (DE)
- Network Rail Ltd (GB)
- OeBB Infrastruktur AG (AT)

Distribution of Ratings

(44 companies in the industry)

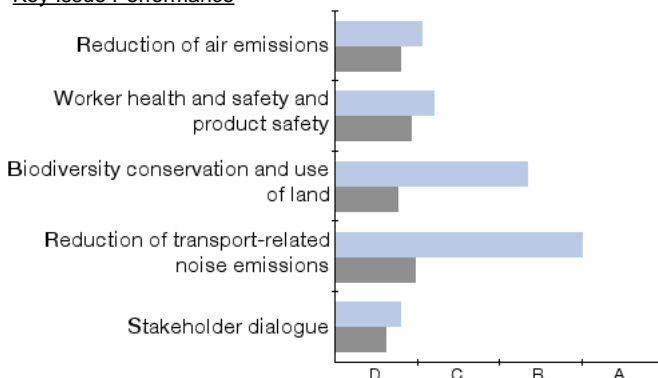


Rating History



Key Issues

Key Issue Performance



Strengths and Weaknesses

- + mainly active in the operation of environmentally sound rail infrastructure
- + adequate measures to minimise transport-related noise emissions
- + some measures to reduce transport-related air emissions
- + reasonable measures to ensure health and safety of users, inhabitants and/or passers-by
- no design guidelines regarding energy efficiency of buildings and infrastructure
- inadequate supply chain management with respect to social minimum standards

Controversy Monitor

Company

Controversy Score: 0
 Controversy Level: Minor

Industry

Maximum Controversy Score: -10
 Controversy Risk: Minor

