

Second-Party Opinion Ferrovie dello Stato Italiane Green Bond

Evaluation Summary

Sustainalytics is of the opinion that the Ferrovie dello Stato Italiane (Ferrovie) Green Bond Framework, dated June 2019, is credible and impactful and aligns with the four core components of the Green Bond Principles 2018. This assessment is based on the following:



USE OF PROCEEDS The green category for eligible use of proceeds – Clean Transportation – is aligned with those recognized by the Green Bond Principles 2018. Sustainalytics considers the eligible category to have positive environmental impact and to advance the UN Sustainable Development Goals 9, 11, and 12.



PROJECT EVALUATION / SELECTION Ferrovie established a dedicated Green Bond Working Committee, chaired by Ferrovie's Head of Finance, to select eligible projects. The Committee consists of cross-functional team members, including representatives from the Sustainability team. Sustainalytics considers this in line with market practice.



MANAGEMENT OF PROCEEDS Ferrovie's Treasury team will track the net use of proceeds through a Green Bond Register. Pending allocation, the amount equal to net proceeds will be placed in normal treasury accounts and will be invested in accordance with Ferrovie's liquidity management policies and guidelines. This is in line with market practice.



REPORTING Ferrovie intends to publish an annual report on its green bond until full allocation. The report will also be included in its annual Sustainability Report. The reporting will include details such as amounts allocated on a project portfolio-level, as well as relevant impact metrics. Sustainalytics views Ferrovie's allocation and impact reporting as aligned with market practice.



Report Sections

Introduction	2
Sustainalytics' Opinion	3
Appendices	8

For inquiries, contact the Sustainable Finance Solutions project team:

Ankita Shukla (New York) Project Manager ankita.shukla@sustainalytics.com (+1) 617 603 3329

Mayur Mukati (Toronto) Project Support mayur.mukati@sustainalytics.com (+1) 647 936 5656

Jean-Claude Berthelot (Amsterdam) Client Relations susfinance.emea@sustainalytics.com (+44) 20 3880 0193



Introduction

Ferrovie dello Stato Italiane SpA ("Ferrovie", the "Issuer", or the "Group") is one of the largest industrial companies in Italy and fully owned by the Ministry of Economy and Finance. The Group has approximately 8,000 trains running every day with 600 million rail passengers within the country, and owns several companies in four segments – transport, supply chain, infrastructure, and real estate and other services – within international markets.^{1,2} The Group, through its subsidiaries, provides passenger and cargo transportation services via rail, road and waterway, and develops, operates and maintains railway network infrastructure (including railway stations) and road network infrastructure along with several other services related to the four segments of its operations. Ferrovie was founded in 1905 and is based in Rome, Italy.³

In November 2017, Ferrovie developed its Green Bond Framework to finance and refinance expenditures related to the company's public transport rolling stock renewal with the goal of improving the performance of its operations and attractiveness of trains for passenger transport in Italy. Ferrovie has expanded its Ferrovie Green Bond Framework (the "Framework"), dated June 2019, to include freight transport rolling stock renewal under which it intends to issue green bond(s) and use the proceeds to finance or refinance, in part or in whole, new and existing projects that promote the Group's core-business of efficient, safe and sustainable transportation.

The updated Framework defines the eligible green category in the following area:

- Clean Transportation
 - Investments in Public Passenger Transport Rolling Stock Renewal, defined as
 - New Electric Multiple Unit trains for regional passenger transport
 - New Electric High-speed Trains "ETR 1000"
 - Investments in Freight Transport Rolling Stock Renewal, defined as
 - New Electric Locomotives
 - New Wagons for Coil Transportation

Ferrovie engaged Sustainalytics to review its Green Bond Framework, dated June 2019, and provide a secondparty opinion on the Framework's environmental credentials and its alignment with the Green Bond Principles 2018 (GBP).⁴ This Framework will be published on Ferrovie's website.⁵

As part of this engagement, Sustainalytics held conversations with various members of Ferrovie's management team to understand the sustainability impact of their business processes and planned use of proceeds, as well as management of proceeds and reporting aspects of the Framework. Sustainalytics also reviewed relevant public documents and non-public information.

This document contains Sustainalytics' opinion of the Ferrovie Green Bond Framework and should be read in conjunction with that Framework.

³ Ferrovie, Euro Medium Term Note Programme- Base Prospectus:

¹ Ferrovie, FS Italiane Holding: <u>https://www.fsitaliane.it/content/fsitaliane/en/fs-group/fsitaliane-holding.html</u>

² Ferrovie, Group Companies: <u>https://www.fsitaliane.it/content/fsitaliane/en/fs-group/group-companies.html</u>

https://www.ise.ie/debt_documents/Base%20Prospectus_44713d06-a521-4ac3-9ab8-7d2c364e3dd8.pdf

⁴ The Green Bond Principles are administered by the International Capital Market Association and are available at <u>https://www.icmagroup.org/green-social-and-sustainability-bonds/green-bond-principles-gbp/</u>

⁵ Ferrovie Green Bond Framework will be available at <u>https://www.fsitaliane.it/content/fsitaliane/en/investor-relations.html</u>

Sustainalytics' Opinion

Section 1: Sustainalytics' Opinion on the Ferrovie Green Bond Framework

Summary

Sustainalytics is of the opinion that the Ferrovie Green Bond Framework is credible and impactful, and aligns with the four core components of the GBP 2018. Sustainalytics highlights the following elements of the Ferrovie Green Bond Framework:

- Use of Proceeds:
 - The green category eligible for the use of proceeds is recognized as impactful by the GBP 2018.
 - The eligible projects under the green use of proceeds will provide meaningful environmental contributions.
 - The eligible category, Clean Transportation, includes Public Passenger and Freight Transport Rolling Stock Renewal projects that promote the development of electric passenger trains, including new high-speed trains, and electric freight trains. Sustainalytics recognizes that such investments will enhance energy efficiency, reduce greenhouse gas (GHG) emissions from the country's public and freight transport, and will support the company's strategy for low-carbon transportation.⁶
- Project Evaluation and Selection:
 - Ferrovie established a dedicated Green Bond Working Committee, chaired by Ferrovie's Head of Finance, to review and identify eligible projects. The Committee consists of members of Ferrovie's Finance and Sustainability teams as well as those of subsidiaries. The eligible projects will be recorded in a Green Bond register following the approval from the Committee. Sustainalytics considers this in line with market practice.
- Management of Proceeds:
 - Ferrovie's Treasury team will track the net use of proceeds through a Green Bond Register which will include a full list of eligible projects with allocated amounts. Pending allocation, the amount equal to net proceeds will be placed into Ferrovie's normal treasury accounts and will be invested in accordance with Ferrovie's liquidity management policies and guidelines into money market products, such as cash and/or cash equivalent and/or bank deposits. This is in line with market practice.
- Reporting:
 - Ferrovie intends to publish a green bond(s) report on its website, until full allocation. The report
 will also be included in the annual Sustainability Report. Sustainalytics views Ferrovie's annual
 allocation and impact reporting as aligned with market practice.
 - The allocation reporting will include details such as amounts allocated on a project portfoliolevel and the impact reporting will include environmental indicators, such as estimated energy savings, and estimated total GHG emissions avoided.

Alignment with Green Bond Principles 2018

Sustainalytics has determined that the Ferrovie Green Bond Framework aligns with the four core components of the GBP 2018. For detailed information please refer to Appendix 1: Green Bond/Green Bond Programme External Review Form.

⁶ Ferrovie has also engaged Sustainalytics to review and verify that Ferrovie's green bond meets the requirements under the Low Carbon Land Transport criteria of the Climate Bonds Standard, and that the Low Carbon Land Transport criteria includes fully electrified public passenger and freight transport as automatically eligible.

Section 2: Sustainability Strategy of the Issuer

Contribution of the Framework to Ferrovie's sustainability strategy

Sustainalytics is of the opinion that Ferrovie has demonstrated a commitment to integrate sustainable practices into its business strategy and operations, as aligned with its strategic vision, through the following efforts as mentioned in its Sustainability Reports of 2017⁷ and 2018.⁸

- Ferrovie has renewed and strengthened its ambition to develop sustainable transport services through a
 process of transformation of the sector based on intermodality. Ferrovie's new strategy (2019-2023
 Business Plan) focuses on people's, travelers' and employees' needs, gathering the past service
 performance data, and carrying on the integration of different modes of transport started in the last few
 years. The Group aims to transform the collective mobility, improving services with a focus on quality and
 customisation, especially in regional and local modes of transport.
- The Group formalized a set of principles under its Sustainability Policy and Governance that governs its business activities, including those of its subsidiaries, and includes a core focus on internal and external stakeholders and the environment on which policies, code of ethics and vision are based.
- Ferrovie conducted a materiality assessment to identify and manage the most significant issues for the Group and its stakeholders, which included: (i) safety, (ii) energy, climate change and air quality, (iii) service quality, (iv) intermodality, (v) human rights and a responsible supply chain, (vi) ethics and integrity.
- Ferrovie's Business Model followed the International Integrated Reporting Framework,⁹ under which it identified energy management and environmental management systems as crucial components of managing its business activities in order to reduce its consumption of natural capital. The Group also focused on other energy efficiency and GHG reductions initiatives including: (i) renewing the vehicle fleet, (ii) making buildings more energy efficient, (iii) building plants powered by renewable sources, and (iv) purchasing certified green energy.
- The Group also aims to decrease the amount of travel by private car and increase the use of mass transport by road, rail or both by offering a door-to-door service through combining different modes of transport, infrastructure, partnerships for car/scooter/bike sharing schemes and technology, such as an app that combines different modes of transport. Moreover, in the freight business, Ferrovie aims to increase the modal shift from road to rail.

Considering the above, Sustainalytics is of the opinion that Ferrovie's sustainability strategy and action demonstrate the importance it places on achieving positive environmental and social impacts. Sustainalytics also believes that Ferrovie's Framework is aligned with the Group's overall sustainability strategy and will support its commitment to provide integrated and sustainable mobility and logistics services.

Well positioned to address common environmental and social risks associated with the projects

While Sustainalytics recognizes that the use of proceeds from Ferrovie's Framework will be directed towards eligible projects that are recognized by the GBP 2018 to have positive environmental impact, Sustainalytics is aware that such projects could also lead to potential negative environmental and social outcomes which are managed and mitigated through, among other things, the following actions:

- To minimize negative environmental impacts of its operations, Ferrovie conducts environmental impact assessments (EIA) and requires its contractors to have an environmental management system that aligns with ISO 14001 standards. For construction projects, contractors also need to carry out environmental analysis and identify material environmental impacts. Environmental inspections and periodic supervisory audits are conducted by its subsidiary Italferr, which serves as a technical supervisor. Ferrovie also reports on an analysis of habitats to protect biodiversity and commits to mitigate noise from sites and stations, to implement permanent sound reduction fixtures and to explore other solutions to reduce the noise generated by train/track contact.
- Ferrovie has a dedicated Sustainability Committee that intends to ensure "integration of social and environmental aspects into economic-financial strategies" and to promote "the values and principles of sustainable development, in line with stakeholders' needs and expectations." In 2018, the Sustainability Committee undertook a collaborative process with internal and external stakeholders to outline its longterm goals.

⁷ Ferrovie, Sustainability Report 2017: <u>https://www.fsitaliane.it/content/dam/fsitaliane/en/Documents/commitment/sustainability-report/2017_FS_Italiane_Sustainability_Report.pdf</u>

⁸ Ferrovie, Sustainability Report 2018: https://www.fsitaliane.it/content/fsitaliane/it/sostenibilita/rapporto-di-sostenibilita.html

⁹ Integrated Reporting, the International Integrated Reporting Framework: <u>http://integratedreporting.org/resource/international-ir-framework/</u>



- The Group's Ethics Committee oversees the alignment of its activities with the commitments defined under the Code of Conduct.¹⁰
- The Group approved the new Sustainability Governance Model that aims to promote the integration of sustainability in the Group's business. This model defines governance and procedures with which Ferrovie intends to ensure the integrated supervision of the three sustainability dimensions.
- The Group updated its Risk Management Model in order to incorporate sustainability-related risks, including environmental and social risks, as well as risks related to the protection of human rights, human resources management, corruption and supply chain.
- The Group adopted a Life Cycle Assessment (LCA) approach from planning to all operations stages in
 order to improve their environmental performance. Additionally, the Group sets out short- and long-term
 strategies and principles through which its subsidiary companies measure and manage their
 environmental performance while pursuing implementation of and certification with environmental
 management systems of all operating sites and processes.
- Ferrovie conducts social impact assessments, continuous community engagement and consultation throughout complex projects, providing adequate measures to minimize negative impact on local communities. Ferrovie's Safety Management System includes train speed protection technologies and regular maintenance of railway infrastructure. The company improves rail track safety through decreasing the number of railroad crossings and improving safety of railroad crossings, including new integrative automatic protection devices to detect obstacles on crossings.
- Ferrovie has structured its supply chain assessment process to understand and manage any underlying impacts. The Group committed to operate within the framework of the UN's Universal Declaration of Human Rights and to contribute to responsible supply chains.
- The Group joined the UN Global Compact in 2017 to formalize its commitment to "inclusive and sustainable global economy," while aligning with its ten principles. The Group also signed the International Union of Railways (UIC) Declaration on Sustainable Mobility and Transport¹¹ in 2011, which supports the ten principles and the development of "sustainable mobility and transport systems" along with "responsible leadership" for rail companies.

Due to the above-mentioned policies, systems and processes, Sustainalytics believes that Ferrovie has sufficient measures to identify, manage and mitigate environmental and social risks commonly associated with the use of proceeds.

Section 3: Impact of Use of Proceeds

The eligible category is recognized as impactful by the GBP 2018.

Ferrovie intends to use the proceeds for investments in the public passenger and freight transport rolling stock renewal, including: (i) new Electric Multiple Unit trains for regional passenger transport; (ii) new Electric High-speed Trains ("ETR 1000"); and (iii) new electric traction locomotives and wagons for freight transport. The eligible category is recognized as impactful by the GBP 2018.

Impact of electrified public passenger and freight transport on greenhouse gas (GHG) reduction

Advancing rail transportation is closely linked to achieving climate targets and to the EU-wide reduction targets for GHG emissions from transportation outlined in the "Roadmap to a Single European Transport Area."¹² The Commission aspires to meet these targets by prioritising modes of transportation that can easily carry large numbers of passengers, such as rail, over cars. Additionally, the Intergovernmental Panel on Climate Change (IPCC) AR5 report¹³ on Transport notes that there is also a need to encourage a shift to low-carbon modes of freight transport. The report mentioned that even though rail freight generated far lower GHG emissions per tonne-kilometre than road, the rate of carbon-related technical innovation was slower with an increased share of air and road freight market at the expense of rail over the past few decades. Moreover, the increasing use of electrified rail transport is also likely to contribute to Italy's GHG emission target of 40%

¹⁰ Ferrovie, Code of Ethics:

https://www.fsitaliane.it/content/dam/fsitaliane/en/Documents/about-us/governance/code-of-ethics/Codice_Etico_2018_ENG.pdf

¹¹ UIC, UIC Declaration: Sustainable Mobility & Transport: <u>https://uic.org/IMG/pdf/uic_sustainability_declaration_final.pdf</u>

¹² The Roadmap envisages a reduction from the transport sector of at least 60% of GHG by 2050 with respect to 1990, and an interim target for 2030 of reducing GHG emissions to around 20% below 2008 levels. Roadmap to a Single European Transport Area. 2011 White Paper: http://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX:52011DC0144

¹³ Climate Change 2014: Mitigation of Climate Change. Contribution of Working Group III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC), Transport: https://www.ipcc.ch/site/assets/uploads/2018/02/ipcc_wq3_ar5_chapter8.pdf



reduction by 2030 compared to 1990 levels, given that the transportation sector in Italy contributed approximately 32.96% of Italy's GHG emissions in 2014.^{14,15}

Sustainalytics is of the opinion that improving long distant rail traffic, including an increase in speed, provides an incentive for passengers to travel by train instead of car or plane. Ferrovie's new wagons for coil transportation, that will be connected to electric locomotives, are equipped with systems to enhance safety along with a potential for reduction of tare weight and energy consumption. Given that electrified public passenger and freight transport are some of the most efficient modes of transportation with respect to their GHG emissions,¹³ Sustainalytics is of the opinion that the advancement of electrified regional and high-speed trains as well as freight transport in Italy can have a great contribution to achieving the EU's and Italy's GHG reduction targets, enabling the modal shift to rail.

Energy efficiency improvements compared to previous models

While rail transport is the most energy efficient mode of passenger transport in the EU, efficiency improvements of trains and the use of electric trains can contribute to further reduce GHG emissions by the transport sector. The eligible projects for regional and high-speed trains both demonstrate energy efficiency improvements compared to previous models. For the regional trains, Ferrovie in its tenders included energy efficiency into its selection criteria and selected trains with improved energy performance compared to train models currently used in Italy and by Ferrovie through lightweight materials, energy efficient ventilation, cooling systems and interior electronic equipment, such as lighting. Furthermore, the ETR 1000 high-speed train has shown an average energy efficiency improvement of about 20.5% compared to the previous model ETR 500.¹⁶ In addition, the ETR 1000 has a recyclability rate of 94.4% and a recoverability rate of 95.8%¹⁷, reducing the life-cycle impact of the trains. The regional trains have a minimum recyclability and recovery rate of 92% and 95%, respectively. Ferrovie also financed new ETR 1000 high speed trains and electric multiple unit (EMU) trains for regional passenger transport through the previous green bond issuance of 2017. Such projects created positive environmental impact by avoiding more than 13,400 tCO₂e emissions from baseline.¹⁶

Given the declared (estimated) energy improvements of the new electric trains compared to previous models, as well as recyclability of the trains, Sustainalytics is of the opinion that the eligible category contributes to increased sustainability and energy efficiency of Ferrovie's operations and the transport system in Italy.

Alignment with/contribution to SDGs

The UN Sustainable Development Goals (SDGs) were set in September 2015 and form an agenda for achieving sustainable development by the year 2030. Ferrovie's green bond advances the following SDG goals and targets:

Use of Proceeds Category	SDG	SDG target
Clean Transportation	9. Industry, Innovation and Infrastructure	9.1 Develop quality, reliable, sustainable and resilient infrastructure, including regional and transborder infrastructure, to support economic development and human well-being, with a focus on affordable and equitable access for all.
	11. Sustainable Cities and Communities	11.2 By 2030, provide access to safe, affordable, accessible and sustainable transport systems for all, improving road safety, notably by expanding public transport, with special attention to the needs of those in vulnerable situations, women, children,
	12. Responsible Consumption and Production	persons with disabilities and older persons. 12.5 By 2030, substantially reduce waste generation through prevention, reduction, recycling and reuse.

¹⁴ United Nations Climate Change Secretariat, Summary of GHG Emissions for Italy:

https://unfccc.int/files/ghg_emissions_data/application/pdf/ita_ghg_profile.pdf

¹⁵ The World Bank Group, CO2 emissions from transport (% of total fuel combustion)- Italy:

https://data.worldbank.org/indicator/EN.CO2.TRAN.ZS?locations=IT

¹⁶ Ferrovie, Green Bond Report related to the EMTN bond issuance Series 7: <u>https://www.fsitaliane.it/content/dam/fsitaliane/Documents/investor-</u>

relations/FS_Italiane_GreenBond_Report_Third%20_Party_Opinion_EMTN_Series_7.pdf

¹⁷ Hitachi Rail Italy, ETR1000 Environmental Product Declaration: <u>http://environdec.com/en/Detail/epd453</u>



Conclusion

Ferrovie dello Stato Italiane ("Ferrovie") has developed the Ferrovie Green Bond Framework under which it is planning to issue green bonds to finance and/or refinance eligible green projects that intend to deliver positive environmental outcomes. Ferrovie has described a process by which proceeds will be tracked, allocated, and managed, and commitments have been made for the allocation and impact reporting.

Sustainalytics believes that the eligible category is aligned with Ferrovie's overall sustainability strategy and efforts, and will also contribute to the advancement of UN SDGs, specifically 9, 11, and 12. Additionally, Sustainalytics believes that Ferrovie has sufficient measures to identify, manage and mitigate environmental and social risks commonly associated with the eligible green projects funded by the use of proceeds.

Based on the above, Sustainalytics is confident that Ferrovie is well-positioned to issue green bonds, and that Ferrovie Green Bond Framework is robust, transparent, and in alignment with the Green Bond Principles 2018.



Appendices

Appendix 1: Green Bond / Green Bond Programme - External Review Form Section 1. Basic Information

Issuer name:	Ferrovie dello Stato Italiane SpA		
Green Bond ISIN or Issuer Green Bond Framework Name, if applicable <i>: [specify as appropriate]</i>	Ferrovie Green Bond Framework, dated June 2019		
Review provider's name:	Sustainalytics		
Completion date of this form:	June 2019		
Publication date of review publication: <i>[where appropriate, specify if it is an update and add reference to earlier relevant review]</i>	Update to previous Ferrovie Green Bond Framework and SPO, dated November 2017.		

Section 2. Review overview

SCOPE OF REVIEW

The following may be used or adapted, where appropriate, to summarise the scope of the review.

The review assessed the following elements and confirmed their alignment with the GBPs:

☑ Use of Proceeds
 ☑ Management of Proceeds
 ☑ Management of Proceeds
 ☑ Reporting

ROLE(S) OF REVIEW PROVIDER

- \boxtimes Consultancy (incl. 2nd opinion) \square Certification
- □ Verification □ Rating
- □ Other *(please specify)*:

Note: In case of multiple reviews / different providers, please provide separate forms for each review.

EXECUTIVE SUMMARY OF REVIEW and/or LINK TO FULL REVIEW (if applicable)

Please refer to Evaluation Summary above.



Section 3. Detailed review

Reviewers are encouraged to provide the information below to the extent possible and use the comment section to explain the scope of their review.

1. USE OF PROCEEDS

Overall comment on section (if applicable):

The green category for eligible use of proceeds – Clean Transportation – is aligned with those recognized by the Green Bond Principles 2018. Sustainalytics considers the eligible category to have positive environmental impact and to advance the UN Sustainable Development Goals 9, 11, and 12.

Use of proceeds categories as per GBP:

Energy efficiency Renewable energy Pollution prevention and control Environmentally sustainable management of living natural resources and land use Terrestrial and aquatic biodiversity \boxtimes Clean transportation conservation Sustainable water and wastewater Climate change adaptation management Eco-efficient and/or circular economy Green buildings adapted products, production technologies and processes Unknown at issuance but currently expected Other (please specify): to conform with GBP categories, or other eligible areas not yet stated in GBPs

If applicable please specify the environmental taxonomy, if other than GBPs:

2. PROCESS FOR PROJECT EVALUATION AND SELECTION

Overall comment on section (if applicable):

Ferrovie established a dedicated Green Bond Working Committee, chaired by Ferrovie's Head of Finance, to select eligible projects. The Committee consists of cross-functional team members, including from Sustainability team. Sustainalytics considers this in line with market practice.

Evaluation and selection

- Credentials on the issuer's environmental sustainability objectives
- Documented process to determine that projects fit within defined categories



\boxtimes	Defined and transparent criteria for projects eligible for Green Bond proceeds	Documented process to identify and manage potential ESG risks associated with the project
	Summary criteria for project evaluation and selection publicly available	Other <i>(please specify):</i>

Information on Responsibilities and Accountability

- ☑ Evaluation / Selection criteria subject to external advice or verification
- □ Other (please specify):

3. MANAGEMENT OF PROCEEDS

Overall comment on section (if applicable):

Pending allocation, the amount equal to net proceeds will be placed in normal treasury accounts and will be invested in accordance with Ferrovie's liquidity management policies and guidelines.

Tracking of proceeds:

- Green Bond proceeds segregated or tracked by the issuer in an appropriate manner
- Disclosure of intended types of temporary investment instruments for unallocated proceeds
- □ Other *(please specify)*:

Additional disclosure:

- \square Allocations to future investments only \square Allocations to both existing and future
 - investments
- □ Allocation to individual disbursements
- Allocation to a portfolio of disbursements
- Disclosure of portfolio balance of
 Oth unallocated proceeds
 - □ Other *(please specify)*:

4. REPORTING

Overall comment on section (if applicable):

Ferrovie intends to publish a report on green bond(s) on its website, until full allocation. The report will also be included in its annual Sustainability Report. The allocation reporting will include details such as amounts allocated on a project portfolio-level, as well as relevant impact metrics. Sustainalytics views Ferrovie's annual allocation and impact reporting as aligned with market practice.

external review):



Use	of proceeds repor	ting:			
	Project-by-proje	ct	\boxtimes	On a project portfolio basis	
	Linkage to indiv	idual bond(s)		Other <i>(please specify):</i>	
	Information	reported:			
	\boxtimes	Allocated amounts			Green Bond financed share of tota investment
		Other <i>(please specify):</i>			
	Fre	quency:			
	\boxtimes	Annual			Semi-annual
		Other (please specify):			
Impa	act reporting:				
	Project-by-project		\boxtimes	On a pro	oject portfolio basis
	Linkage to individual bond(s)			Other (p	please specify):
	Fre	quency:			
	\boxtimes	Annual			Semi-annual
		Other (please specify):			
	Info	ormation reported (expected	or ex-	post):	
	\boxtimes	GHG Emissions / Savings		\boxtimes	Energy Savings
		Decrease in water use			Other ESG indicators (please specify):
	ins of Disclosure				
	Information published in financial report			Informa report	ation published in sustainability

- □ Information published in ad hoc documents □ Other (please specify): Green Bond reporting on the corporate website.
 - documents reporting on the corporate website. Reporting reviewed (if yes, please specify which parts of the reporting are subject to

Where appropriate, please specify name and date of publication in the useful links section.

USEFUL LINKS (e.g. to review provider methodology or credentials, to issuer's documentation, etc.)

SPECIFY OTHER EXTERNAL REVIEWS AVAILABLE, IF APPROPRIATE

Type(s) of Review provided:

- □ Consultancy (incl. 2nd opinion)
- □ Verification / Audit
- \Box Other *(please specify):*

Review provider(s):

Certification

□ Rating

Date of publication:

ABOUT ROLE(S) OF INDEPENDENT REVIEW PROVIDERS AS DEFINED BY THE GBP

- i. Second Party Opinion: An institution with environmental expertise, that is independent from the issuer may issue a Second Party Opinion. The institution should be independent from the issuer's adviser for its Green Bond framework, or appropriate procedures, such as information barriers, will have been implemented within the institution to ensure the independence of the Second Party Opinion. It normally entails an assessment of the alignment with the Green Bond Principles. In particular, it can include an assessment of the issuer's overarching objectives, strategy, policy and/or processes relating to environmental sustainability, and an evaluation of the environmental features of the type of projects intended for the Use of Proceeds.
- ii. Verification: An issuer can obtain independent verification against a designated set of criteria, typically pertaining to business processes and/or environmental criteria. Verification may focus on alignment with internal or external standards or claims made by the issuer. Also, evaluation of the environmentally sustainable features of underlying assets may be termed verification and may reference external criteria. Assurance or attestation regarding an issuer's internal tracking method for use of proceeds, allocation of funds from Green Bond proceeds, statement of environmental impact or alignment of reporting with the GBP, may also be termed verification.
- iii. Certification: An issuer can have its Green Bond or associated Green Bond framework or Use of Proceeds certified against a recognised external green standard or label. A standard or label defines specific criteria, and alignment with such criteria is normally tested by qualified, accredited third parties, which may verify consistency with the certification criteria.
- iv. Green Bond Scoring/Rating: An issuer can have its Green Bond, associated Green Bond framework or a key feature such as Use of Proceeds evaluated or assessed by qualified third parties, such as specialised research providers or rating agencies, according to an established scoring/rating methodology. The output may include a focus on environmental performance data, the process relative to the GBP, or another benchmark, such as a 2-degree climate change scenario. Such scoring/rating is distinct from credit ratings, which may nonetheless reflect material environmental risks.



Disclaimer

© Sustainalytics 2019. All rights reserved.

The intellectual property rights to this Second-Party Opinion (the "Opinion") are vested exclusively in Sustainalytics. Unless otherwise expressly agreed in writing by Sustainalytics, no part of this Opinion may be reproduced, disseminated, comingled, used to create derivative works, furnished in any manner, made available to third parties or published, parts hereof or the information contained herein in any form or in any manner, be it electronically, mechanically, through photocopies or recordings, nor publicly released without the "Green Bond Framework" in conjunction with which this Opinion has been developed.

The Opinion was drawn up with the aim to provide objective information on why the analyzed bond is considered sustainable and responsible, and is intended for investors in general, and not for a specific investor in particular. Consequently, this Opinion is for information purposes only and Sustainalytics will not accept any form of liability for the substance of the opinion and/or any liability for damage arising from the use of this Opinion and/or the information provided in it.

As the Opinion is based on information made available by the client, the information is provided "as is" and, therefore Sustainalytics does not warrant that the information presented in this Opinion is complete, accurate or up to date, nor assumes any responsibility for errors or omissions. Any reference to third party names is for appropriate acknowledgement of their ownership and does not constitute a sponsorship or endorsement by such owner.

Nothing contained in this Opinion shall be construed as to make a representation or warranty, express or implied, regarding the advisability to invest in or include companies in investable universes and/or portfolios. Furthermore, nothing contained in this Opinion shall be construed as an investment advice (as defined in the applicable jurisdiction), nor be interpreted and construed as an assessment of the economic performance and credit worthiness of the bond, nor to have focused on the effective allocation of the funds' use of proceeds.

The client is fully responsible for certifying and ensuring its commitments' compliance, implementation and monitoring.



Sustainalytics

Sustainalytics is a leading independent ESG and corporate governance research, ratings and analytics firm that supports investors around the world with the development and implementation of responsible investment strategies. With 13 offices globally, the firm partners with institutional investors who integrate ESG information and assessments into their investment processes. Spanning 30 countries, the world's leading issuers, from multinational corporations to financial institutions to governments, turn to Sustainalytics for second-party opinions on green and sustainable bond frameworks. Sustainalytics has been certified by the Climate Bonds Standard Board as a verifier organization, and supports various stakeholders in the development and verification of their frameworks. In 2015, Global Capital awarded Sustainalytics "Best SRI or Green Bond Research or Ratings Firm" and in 2018 and 2019, named Sustainalytics the "Most Impressive Second Party Opinion Provider. The firm was recognized as the "Largest External Reviewer" by the Climate Bonds Initiative as well as Environmental Finance in 2018, and in 2019 was named the "Largest Approved Verifier for Certified Climate Bonds" by the Climate Bonds Initiative. In addition, Sustainalytics received a Special Mention Sustainable Finance Award in 2018 from The Research Institute for Environmental Finance Japan and the Minister of the Environment Award in the Japan Green Contributor category of the Japan Green Bond Awards in 2019.

For more information, visit <u>www.sustainalytics.com</u>

Or contact us info@sustainalytics.com

