

INDEPENDENT REVIEW

of the management of JFM's Green Bond issued in 2021

V.E is of the opinion that the Green Bond issued in 2021 by Japan Finance Organization for Municipalities ("JFM") remains aligned with the four core components of the Green Bond Principles 2021 ("GBP")



Key Findings¹

- ▶ We express a reasonable² assurance on the Issuer's capacity to use the Bond's proceeds to finance Eligible Projects, in line with its initial commitments.
- ▶ We express a reasonable assurance on the Issuer's capacity to implement the evaluation and selection process, in line with its initial commitments.
- ▶ We express a reasonable assurance on the Issuer's capacity to implement the allocation process, in line with its initial commitments.
- ▶ We express a reasonable assurance on the Issuer's capacity to implement the reporting process, in line with its initial commitments:
 - First, we express a reasonable assurance on the Issuer's capacity to report on the fund allocation, in line with its initial commitments. The indicators used for the allocation reporting are complete and relevant, at project level.
 - We express a reasonable assurance on the Issuer's capacity to report on environmental benefits of the financed Eligible Projects, in line with its initial commitments. The indicators used for the environmental benefits reporting (outputs, outcomes and impacts) are relevant and in line with market standards.

SUMMARY: LEVEL OF ASSURANCE OF THE ISSUER'S CAPACITY TO REMAIN ALIGNED WITH THE GBP 2021				
USE OF PROCEEDS	ALLOCATION OF PROCEEDS	MANAGEMENT OF PROCEEDS	REPORT ON THE ALLOCATION OF PROCEEDS	REPORT ON THE ENVIRONMENTAL AND SOCIAL BENEFITS
Reasonable	Reasonable	Reasonable	Reasonable	Reasonable
Moderate	Moderate	Moderate	Moderate	Moderate
Weak	Weak	Weak	Weak	Weak

¹ This Review is to be considered as the "Consultant review" described by the International Capital Market Association (www.icmagroup.org).

² The detailed definition of V.E' scales of assessment can be found in the Methodology section.



SCOPE

In 2020, V.E was commissioned to provide an independent opinion (thereafter “Second Party Opinion” or “SPO”) on the sustainability credentials and management of the Green Bond Framework³ (“the Framework”) created by JFM (the “Issuer”). We issued our SPO on January 13, 2020.

V.E has been commissioned by JFM to provide an independent opinion (or “Review”) on the management of its 2021 Green Bond issuance, based on the review of its JFM Green Bond Impact Report 2021.

Our opinion is established according to V.E’s Environmental, Social and Governance (“ESG”) exclusive assessment methodology and to the ICMA’s Green Bond Principles (“GBP”) voluntary guidelines edited in June 2021.

Our opinion is built on the review of following components:

- Eligible Projects: evaluation of the Issuer’s capacity to use the Bond’s proceeds to finance Projects with sustainability benefits, and to report on the Projects outputs and impacts, in line with its initial commitments.
- Bond: evaluation of the Issuer’s capacity to implement the Bond’s processes, (evaluation and selection, and management of proceeds) and to report on the allocation of the Bond’s proceeds, in line with its initial commitments.

Our sources of information are multichannel, combining data (i) gathered from public sources, press content providers and stakeholders, (ii) from V.E’s exclusive ESG rating database, and (iii) information provided from the Issuer, through documents and interviews conducted with the Issuer’s managers and stakeholders involved in the Bonds issuance, held via a telecommunications system.

We carried out our due diligence assessment from November 29th to December 24 2021. We consider that we were provided with access to all the appropriate documents and interviewees we solicited. To this purpose we used our reasonable efforts to verify such data accuracy.

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³ The “Green Bond” is to be considered as the bond issued, subject to the discretion of the Issuer. The name “Green Bond” has been decided by the Issuer: it does not imply any opinion from Vigeo Eiris.

DETAILED RESULTS

Use of Proceeds

We express a reasonable assurance on the Issuer's capacity to use the Bond's proceeds to finance the Eligible Projects, in line with its initial commitments.

According to the information provided by the Issuer, 100% of the net proceeds of the issuance have been used to finance Eligible Projects for a total amount of approximately JPY 80 billion (EUR 600 million). V.E had access to the last updated version of JFM's Green Bond Impact Report 2021. The report was made publicly available on the Issuer's website on December 2021⁴.

In particular, the Bond's proceeds have been reported by the Issuer as used to finance one Eligible Category of Eligible Projects:

Sustainable Water and Wastewater Management

- ▶ Pipes (New and Renewals)
 - Pipes covered the largest portion with 64% of loan amounts allocated through the Green Bond
 - 74 projects were funded representing a total loan amount of JPY 50,366.0 million
 - Construction of new, extension, flood control measure, wastewater pipes, etc
- ▶ Sewerage Management Related Facilities (New and Renewals)
 - Sewerage treatment plants covered 12% of loan amounts allocated through the Green Bond
 - 41 projects were funded representing a total loan amount of JPY 9,577.6 million
 - Rainwater pool, water intakes, purification tanks, mechanical electrical equipment
- ▶ Facility/Equipment (New and Renewals)
 - Advanced treatment plants covered 1% of loan amounts allocation through the Green Bond
 - 3 projects were funded representing a total loan amount of JPY 1,010.9 million
 - Replacement of aging facilities, upgrade of blowers
 - Purification centres covered 3% of loan amounts allocated through the Green Bond
 - 8 projects were funded representing a total loan amount of JPY 1,968.2 million
 - Sludge incinerator, mechanical equipment replacement, sludge circulating pump, dewatering
 - Pump stations covered 5% of loan amounts allocated through the Green Bond
 - 25 projects were funded representing a total loan amount of JPY 3,555.8 million
 - Other categories covered 15% of loan amounts allocated through the Green Bond
 - 21 projects were funded representing a total loan amount of JPY 11,758.6 million
 - These projects include watershed, sewage duct, toilets, rainwater treatment facilities

The reported financed Eligible Projects appear to be in line with the Eligible Category initially defined by the Issuer in its Framework, namely: Sustainable Water and Waste Management which represents 100% of the total proceeds of the Bonds.

The Eligible Projects financed effectively contribute to the three environmental objectives initially identified by the Issuer, namely: Pollution prevention and control, water resource conservation, and efficient energy use of sewage sludge, sewage sludge recycle.

The Issuer had initially committed to assess the environmental benefits of the Bonds. We consider the environmental benefits to be clearly assessed.

The Issuer has reported that there was no refinancing.

⁴ https://www.jfm.go.jp/en/investors/green_bond2.html



We consider that the selected Eligible Projects are likely to contribute to six United Nations’ Sustainable Development Goals (SDGs), namely: SDG 3: Good Health and Well-being, SDG 6: Water and Sanitation, SDG 11: Sustainable Cities and Communities, SDG 13: Climate Action, SDG 14: Life Below Water and SDG 15: Life on Land.

ELIGIBLE CATEGORIES	UN SDGS IDENTIFIED	UN SGD TARGETS
Sustainable Water and Wastewater Management		3.9 By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination
		6.3 By 2030, improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally
		11.5 By 2030, significantly reduce the number of deaths and the number of people affected and substantially decrease the direct economic losses relative to global gross domestic product caused by disasters, including water-related disasters, with a focus on protecting the poor and people in vulnerable situations
		13.1 Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries
		14.1 By 2025, prevent and significantly reduce marine pollution of all kinds, in particular from land-based activities, including marine debris and nutrient pollution
		15.1 By 2020, ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains and drylands, in line with obligations under international agreements



Evaluation and Selection of Eligible Projects

We express a reasonable assurance on the Issuer's capacity to implement the evaluation and selection process, in line with its initial commitments.

The evaluation and selection process of the Eligible Projects appears to be efficiently implemented. V.E had access to all the appropriate documents (see below).

- The evaluation and selection of Eligible Projects are based on relevant internal expertise, with well-defined roles and responsibilities:
 - Each local government has consulted with either the national government or prefecture as appropriate to receive consent or approval for the borrowing and formulated sewerage business plan regulated under the laws (Sewerage Law, Purification Layer Law and Water Pollution Control Law) and acts (Sewerage Act, Septic Tank Act, Water Pollution Control Act) of Japan. Penal regulations will be applied for non-compliance.
 - Once the local governments have received consent or approval, they may apply for JFM for funding and will be evaluated and selected by the JFM Green Bond Working Group.
 - Following the extension of loans by JFM to the Eligible Projects, JFM's Green Bond Working Group conducted surveys with the relevant local governments to gain impact metrics.
 - The Green Bond Working Group has selected 63 local governments which JFM financed for sewerage projects between 4 February 2021 and 30 March 2021 and of which the loan amount for the project was JPY 300 million or higher in principle and conducted a survey. The Green Bond Working Group obtained effective responses from 55 local governments representing a total of approximately JPY 80 billion in loan amounts.
 - JFM's Green Bond Working Group was responsible for ensuring that the allocation of the net proceeds (or an amount equal to the net proceeds) of the issuance of the Green Bonds was in alignment with the eligibility criteria set forth in its Green Bond Framework. The loan department also confirm that the borrower has obtained consent or approval on the borrowing, in accordance with the requirements of Japanese law.
 - JFM identified the main ESG risks of the eligible projects including, but not limited to, Biodiversity/Pollution prevention and control (for both accidental and chronic contamination), Waste management (of sludges and by-products), User/neighbours safety, Health and safety for workers and Integration of E&S in supply chain (for construction and operation). Penal regulations will be applied for non-compliance and the national and prefectural governments provide advice and demand corrective actions.
 - If JFM determines that it is not suitable for the loan, JFM demands reimbursement based on the provisions to the borrower.

An area of improvement would be to have an external verifier to review the compliance of the selection process with the Issuer's commitments.



Management of Proceeds

We express a reasonable assurance on the Issuer's capacity to implement the allocation process, in line with its initial commitments.

The allocation process appears to be implemented, however VE did not have access to a financial audit. The Issuer states that the management of the proceeds has been made according to its initial commitment:

- Prior to the allocation of loans to Eligible Projects, an amount equal to the net proceeds of the issuance of the Green Bonds has been invested in JFM's liquidity portfolio in cash and cash equivalent
- JFM issued its second green bonds in February 2021 to finance the Japanese local governments' sewerage projects and fully allocated the net proceeds by 30 March 2021 after issuance
- JFM clearly presents the breakdown of Green Bond effective portfolio by type of project, loan amount and share of new and renewal projects
- JFM's Green Bond Working Group has tracked, monitored and accounted for the allocation of the net proceeds of the issuance of the Green Bonds

Additionally, JFM has conducted inspections and examinations on projects which JFM has funded to make sure that the net proceeds of the issuance were allocated to the Eligible Projects.

Monitoring & Reporting

We express a reasonable assurance on the Issuer's capacity to implement the reporting process, in line with its initial commitments.

The Issuer reports annually on the Bonds, in line with its initial commitment.

JFM's Green Bond Working Group conducted a survey of its local government borrowers in respect of the environmental impact of their sewage projects and the amounts of loans made by JFM allocated to the projects.

First, we express a reasonable assurance on the Issuer's capacity to report on the fund allocation, in line with its initial commitments. The indicators used for the allocation reporting are complete and relevant including:

- The amount of net proceeds (or amount equal to the net proceeds) allocated to Eligible Projects in the Effective Portfolio
- A list of projects (Project-by-project reporting on Effective Portfolio)
- A breakdown of the Effective Portfolio by project type
- Refinancing rate (in % of the total amount of proceeds)

Secondly, we express a reasonable assurance on the Issuer's capacity to report on the environmental benefits of the financed Eligible Projects, in line with its initial commitments. The indicators used for the environmental benefits reporting (outputs, outcome and impact indicators) are relevant and in line with market standards.

ELIGIBLE CATEGORY	ENVIRONMENTAL AND SOCIAL BENEFITS INDICATORS	V.E'S OPINION
	OUTPUTS, OUTCOME AND IMPACT INDICATORS	
Pipes (New and Renewals)	<ul style="list-style-type: none"> - Newly constructed pipe length (m) - Covered area population - Amount of treated water (actual, annual total, before and after renewal) (m³) - Other positive environmental impact (if any) 	The selected indicators are relevant and in line with the Issuer's initial commitment.



<p>Sewerage Management Related Facilities (New and Renewals)</p>	<ul style="list-style-type: none"> - Covered area population - Water management capacity (m³) - BOD Planned [Year/Period Average] (mg/L) - BOD Actual [Maximum monthly results] (mg/L) after treatment - Phosphorous (Year/Period Average) (mg/L) - Phosphorous Actual [Maximum monthly results] (mg/L) after treatment - Water Quality (BOD) (Year/Period Average) (mg/L) - Water Quality (phosphorus) (Year/Period Average) (mg/L) - Electricity consumption (Actual or reduced kWh) - Other positive environmental impact (if any) 	<p>The selected indicators are relevant and in line with the Issuer’s initial commitment.</p>
<p>Facility/Equipment (New and Renewals)</p>	<ul style="list-style-type: none"> - Covered area population - Water management capacity (m³) - BOD Planned [Year/Period Average] (mg/L) - BOD Actual [Maximum monthly results] (mg/L) after treatment - Phosphorous (Year/Period Average) (mg/L) - Phosphorous Actual [Maximum monthly results] (mg/L) after treatment - Water Quality (BOD) (Year/Period Average) (mg/L) - Water Quality (phosphorus) (Year/Period Average) (mg/L) - GHG reduction (%) - Electricity consumption (Actual kWh) - Other positive environmental impact (if any) 	<p>The selected indicators are relevant and in line with the Issuer’s initial commitment.</p>

An area of improvement would be to report on the absolute amount of sludges treated and disposed of (in tonnes of dry solids per month/year).

METHODOLOGY

In V.E' view, Environmental, Social and Governance (ESG) factors are intertwined and complementary. As such they cannot be separated in the assessment of ESG management in any organization activity or transaction. In this sense, V.E writes an opinion on the Issuer's Corporate Social Responsibility as an organization, and on the Issuances through the objectives, management and reporting of the assets/projects to be (re)financed.

V.E' methodology for the definition and assessment of the ESG performance is based on criteria aligned with public international standards, in compliance with the ISO 26000 guidelines, and organized in 6 domains: Environment, Human Resources, Human Rights, Community Involvement, Business Behaviour and Corporate Governance. The evaluation framework has been customized regarding material issues, based on our relevant sector ESG assessment frameworks and on specific issues considering the Issuer's activity.

Our research and rating procedures are subject to internal quality control at three levels (analysts, heads of cluster sectors, and internal review by the audit department for second party opinions) complemented by a final review and validation by the Direction of Methods. A right of complaint and recourse is guaranteed to all companies under our review, including three levels: first, the team linked to the company, then the Direction of Methods, and finally V.E' Scientific Council. All collaborators are signatories of V.E' Code of Ethics.

ELIGIBLE BUSINESSES AND PROJECTS REVIEW

The analysis of the conformance with the Issuer's initial commitments covers both the eligibility criteria (based on the definition of Eligible Categories, use of proceeds requirements) and the selection criteria (based on the ESG commitments).

Our review covers both the implementation of the initial commitments made by the Issuer in the SPO, and its 2019 Sustainability Bond Report:

- Fund allocation, reporting on the use of proceeds, considered as a primary component and mandatory to achieve reasonable level of assurance at Bond portfolio level; and
- Social and environmental benefits, reporting on outputs, outcomes and impact indicators, considered as a primary component and mandatory to achieve reasonable level of assurance at Bond portfolio level.

BONDS REVIEW

The analysis of the implementation of the Bonds' processes and commitments covers:

- The evaluation and selection process, i.e. assessment of the coherence and efficiency of the implemented process, and of the exhaustiveness of the ESG issues covered; and
- The allocation of proceeds' process based on the rules for management of proceeds defined prior to the issuance of the Bonds.

The analysis of the existence and completeness of the reporting, at Bond portfolio level, according to the Issuer's initial commitments, also covers two components:

- Fund allocation, reporting on the aggregated use of proceeds, considered as a primary component and mandatory to achieve a reasonable level of assurance at Bond portfolio level.
- Social and environmental benefits, reporting on aggregated output and impact indicators, considered as a primary component and mandatory to achieve a reasonable level of assurance at Bond portfolio level.

REPORTING

The reporting indicators in place for the allocation of proceeds and for the sustainable benefits are evaluated according to the quality of the indicators (exhaustiveness and relevance), and considering the reporting nature and management (format, visibility, data collection, etc.).

The evaluation of the projects results is conducted at Bond portfolio level, including aggregated reporting, based on both social and environmental benefits, considered as essential to achieve a good performance.



V.E'S ASSESSMENT SCALES

Performance evaluation	
Advanced	Advanced commitment; strong evidence of command over the issues dedicated to achieving the objective of social responsibility. Reasonable level of risk management and using innovative methods to anticipate emerging risks.
Good	Convincing commitment; significant and consistent evidence of command over the issues. Reasonable level of risk management.
Limited	Commitment to the objective of social responsibility has been initiated or partially achieved; fragmentary evidence of command over the issues. Limited to weak level of risk management.
Weak	Commitment to social responsibility is non-tangible; no evidence of command over the issues. Level of insurance of risk management is weak to very weak.

Level of assurance	
Reasonable	Able to convincingly conform to the prescribed principles and objectives of the evaluation framework
Moderate	Compatibility or partial convergence with the prescribed principles and objectives of the evaluation framework
Weak	Lack or unawareness of, or incompatibility with the prescribed principles and objectives of the evaluation framework



DISCLAIMER

Transparency on the relation between V.E and the Issuer: V.E has executed one audit mission for JFM until so far (one Second Party Opinion in 2020). No established relation (financial or commercial) exists between V.E and the Issuer. V.E's conflict of interest policy is covered by its Code of Conduct, which can be found at <http://vigeo-eiris.com/wp-content/uploads/2018/07/Code-of-Conduct-Vigeo-Eiris-EN.pdf>.

This opinion aims at providing a post-issuance independent review on the sustainability credentials and management of the Bonds based on the information which has been made available to V.E. V.E has neither interviewed stakeholders out of the Issuer's employees, nor performed an on-site audit nor other test to check the accuracy of the information provided by the Issuer. The accuracy, comprehensiveness and trustworthiness of the information collected are a responsibility of the Issuer. Providing this review does not mean that V.E certifies the effectiveness, the excellence or the irreversibility of the assets financed by the Bonds. The Issuer is fully responsible for attesting the compliance with its commitments defined in its policies, for their implementation and their monitoring. The opinion delivered by V.E neither focuses on the financial performance of the Bonds, nor on the effective allocation of its proceeds. V.E is not liable for the induced consequences when third parties use this opinion either to make investments decisions or to make any kind of business transaction.

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