

Vanguard Group, Inc.

Type of Engagement: Annual Review

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Engagement Team:

Hrithik Sharma, hrithik.sharma@morningstar.com, (+1) 647 951 3309

Aishwarya Ramchandran, aishwarya.ramchandran@morningstar.com

Introduction

In August 2020, the Vanguard Group, Inc. (“Vanguard”) issued a green bond (the “Green Bond”) to finance projects aimed at advancing its transition to a low-carbon and sustainable work environment. Sustainalytics provided a Second-Party Opinion on the Vanguard Green Bond Framework (the “Framework”) in July 2020. In June 2023, Vanguard engaged Sustainalytics to review the projects funded between June 2022 and May 2023 with proceeds from the Green Bond and provide an assessment as to whether the projects met the use of proceeds criteria and the reporting commitments outlined in the Framework. This is Sustainalytics’ third annual review of allocation and reporting of the instruments issued under the Framework, following a previous review in June 2022 and June 2021.

Evaluation Criteria

Sustainalytics evaluated the projects and assets funded between June 2022 and May 2023 based on whether the projects:

1. Met the use of proceeds and eligibility criteria defined in the Framework; and
2. Reported on at least one of the key performance indicators (KPIs) for each use of proceeds criteria outlined in the Framework.

Table 1: Use of Proceeds, Eligibility Criteria and associated KPIs

Use of Proceeds Category	Eligibility Criteria	Key Performance Indicators
Green Buildings	<p>New or existing investments in or expenditures related to construction, development and upgrades of properties that have received or are expected receive:</p> <ul style="list-style-type: none"> • Energy Star score of 75 or higher; • Leadership in Energy and Environmental Design (LEED): Platinum or Gold; • Other equivalent internationally and/or nationally recognized certifications 	<ul style="list-style-type: none"> • Number of buildings Energy Star certified • Number of buildings with a certification dedication
Renewable Energy	<p>Investments and expenditures related to the construction, development, acquisition, maintenance and operation of renewable energy, such as:</p> <ul style="list-style-type: none"> • Renewable energy certificates (REC), and any other investment vehicle that provides for the procurement of renewable energy 	<ul style="list-style-type: none"> • Purchased RECs compared to MWh consumed • Estimated annual CO₂ emissions avoided (tCO₂e)
Energy Efficiency	<p>Investments related to activities that contribute to the reduction of energy consumption including equipment,</p>	<ul style="list-style-type: none"> • Description of the new data center and other energy efficiency initiatives adopted

	<p>systems, operation improvements, and maintenance, such as:</p> <ul style="list-style-type: none"> • Energy efficient investments in new or refurbished buildings which result in energy savings higher than 20%; including investments in Vanguard’s newly established data center; • Energy-efficient lighting (LED lighting); • Installation of green roofs to improve energy and water efficiency; • Installation of new building automation systems and new HVAC units to reduce electricity consumption 	<ul style="list-style-type: none"> • % reduction of kWh
Clean Transportation	<p>Investments related to energy efficiency low-carbon transport, such as:</p> <ul style="list-style-type: none"> • Development of clean transportation infrastructure including electric car charging stations 	<ul style="list-style-type: none"> • Number of charging stations • % of fleet powered by alternative fuel
Sustainable Water and Wastewater Management	<p>Investments related to activities that improve water quality, distribution efficiency and conservation, such as:</p> <ul style="list-style-type: none"> • Flood mitigation; • Water capture and storage infrastructure, including storm water management systems, water distribution systems and sewer systems 	<ul style="list-style-type: none"> • Description of the water efficiency initiatives adopted
Pollution Prevention and Control	<p>Investments related to activities that contribute to waste prevention and collection, waste reduction and waste recycling, such as:</p> <ul style="list-style-type: none"> • Enhanced recycling programmes in food-service areas and recycling of construction waste 	<ul style="list-style-type: none"> • Description of the initiatives adopted

Issuer’s Responsibility

Vanguard is responsible for providing accurate information and documentation relating to the details of the funded projects, including description of projects, amounts allocated and project impact.

Independence and Quality Control

Sustainalytics, a leading provider of ESG research and ratings, conducted the verification of the use of proceeds from Vanguard’s Green Bond. The work undertaken as part of this engagement included collection of documentation from Vanguard and review of said documentation to assess conformance with the Framework.

Sustainalytics relied on the information and the facts presented by Vanguard. Sustainalytics is not responsible nor shall it be held liable for any inaccuracies in the opinions, findings or conclusions herein due to incorrect or incomplete data provided by Vanguard.

Sustainalytics made all efforts to ensure the highest quality and rigor during its assessment process and enlisted its Sustainability Bonds Review Committee to provide oversight of the review.

Conclusion

Based on the limited assurance procedures conducted,¹ nothing has come to Sustainalytics' attention that causes us to believe that, in all material respects, the reviewed projects do not conform with the use of proceeds criteria and reporting commitments in the Framework. Vanguard has disclosed to Sustainalytics that the proceeds from the Green Bond have been fully allocated as of 31 May 2023.

Detailed Findings

Table 2: Detailed Findings

Framework Requirements	Procedure Performed	Factual Findings	Error or Exceptions Identified
Use of Proceeds Criteria	Verification of the projects funded with proceeds from the Green Bond between June 2022 and May 2023 to determine if projects aligned with the use of proceeds criteria outlined in the Framework.	All projects reviewed complied with the use of proceeds criteria.	None
Reporting Criteria	Verification of the projects funded by the Green Bond between June 2022 and May 2023 to determine if impact of projects was reported in line with the commitments outlined in the Framework. For a full list of KPIs reported, please refer to Appendix 1.	All projects reviewed reported on at least one KPI per use of proceeds category.	None

¹ Sustainalytics limited assurance process includes reviewing the documentation relating to the details of the funded projects, including description of projects, their estimated and realized costs and impact, as provided by the issuing entity, which is responsible for providing accurate information. Sustainalytics has not conducted on-site visits to projects.

Appendix

Appendix 1: Allocation and Reported Impact by Category²

Use of Proceeds Category ³	Use of Proceeds	Impact Reported	Bond Proceeds Allocation (USD)
Energy Efficiency	Replacement of lighting, upgrades to building automation system and HVAC, exterior lighting with more energy efficiency LED lights and roofs with new lighter colour ⁴	Expected increase in energy efficiency of lights and reduction in scope 2 emissions, reduction in water usage and heat in building, elimination of refrigerant (R-22)	9,795,048
	Purchase and upgrade of servers, network switches and equipment, and mainframe storage arrays	Among other expenditures, Vanguard's "DC refresh" initiative is expected to migrate its existing open systems compute and storage infrastructure from a "three tier" to a "hyperconverged" architecture. This migration will consolidate infrastructure that was previously hosted on separate computers and storage components to individual servers Approximately 25% reduction expected in computer and storage power consumption	5,887,098
	Total allocation under the Energy Efficiency category (USD)		15,682,146
Clean Transportation	Replacement of existing EV chargers with ChargePoint chargers	Expected energy savings; better reporting capability; reduction in gas consumption	883,338
	Total allocation under the Clean Transportation category (USD)		883,338
Bond proceeds allocated between June 2022 and May 2023 (USD million)			16.6
Bond proceeds allocated between June 2021 and May 2022 (USD million)			53.8
Bond proceeds allocated between August 2020 and May 2021 (USD million)			167
Bond proceeds allocated as of May 2023 (USD million)			235⁵
Bond proceeds raised (USD million)			235⁶
Percentage of proceeds allocated			100%

² As of 31 May 2023.

³ As of May 2023, no allocation has been made in the Renewable Energy and Pollution Prevention and Control categories. Vanguard has also communicated that all proceeds allocated between June 2022 and May 2023 are towards new expenditures or projects only.

⁴ Vanguard has confirmed that the financed systems or projects are more energy efficient than the existing or conventional counterparts and that the construction and refurbishment costs were not funded under this category.

⁵ Pro-rata computation on proceeds to USD 235 million given that a total of USD 237.4 million was allocated by Vanguard to assets financed.

⁶ Vanguard has confirmed to Sustainalytics that the eligibility of the reviewed portfolio of projects continues to align with the Framework criteria and that there is no double-accounting in terms of the projects funded in the said previous periods (August 2020 to May 2021 and June 2021 to May 2022) and between June 2022 and May 2023.

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