

Sustainalytics' Opinion

Votorantim Cimentos Sustainability Linked Loan

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Location of Borrower: Brazil

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Introduction

Votorantim Cimentos S.A. (“Votorantim Cimentos”, the “company”, or the “borrower”) is a manufacturer of construction materials, including cement, concrete, aggregates and mortars, grouts, plasticizers and agricultural inputs, with an annual production capacity of more than 50 million metric tons. The company was founded in 1933 and is based in São Paulo, Brazil, and has an international presence in 11 other countries.

Votorantim Cimentos is negotiating a Sustainability Linked Loan (SLL) where the interest rate of the loan is tied to Sustainability Performance Targets (SPTs) that include three Key Performance Indicators (KPIs) associated with the company’s material sustainability-related issues.

The company has engaged Sustainalytics to review the SLL and provide an opinion on the alignment of the loan with the Sustainability Linked Loan Principles (SLLP).¹

As part of this engagement, Sustainalytics held conversations with various members of the company’s management team to understand the SPTs, including KPIs, the company’s sustainability strategy, as well as processes that it has in place to verify its performance in relation to the SPTs. Sustainalytics also reviewed relevant public documents.

This document contains Sustainalytics’ opinion of Votorantim Cimentos’s SLL, reviewed against the SLLP.

Sustainalytics’ Opinion

Alignment with the Sustainability Linked Loan Principles 2019

The four core components of the Sustainability Linked Loan Principles are:

1. Relationship to Borrower’s Overall Corporate Social Responsibility (CSR) Strategy
2. Target Setting – Measuring the Sustainability of the Borrower
3. Reporting
4. Review

Sustainalytics is of the opinion that the Votorantim Cimentos’ SLL aligns to the four core components of the Sustainability Linked Loan Principles 2019.

¹ The Sustainability Linked Loan Principles (SLLP) were launched by the Loan Markets Association in March 2019. They are administered by the LMA and are available at: https://www.lma.eu.com/application/files/8015/5307/4231/LMA_Sustainability_Linked_Loan_Principles.pdf.

Section 1: Relationship to Votorantim Cimentos' overall sustainability strategy

The company has demonstrated its commitment to its sustainability strategy through the following efforts, as reported in its 2018 Integrated Report² and its "Our Sustainability Commitments for 2020" document³:

- The company developed its Strategic Sustainability Plan based on the most significant sustainability trends, its vision and its stakeholder expectations. The Plan is comprised of four strategic drivers: (i) safety, (ii) ethics and compliance, (iii) eco-efficiency and innovation, and (iv) community engagement.⁴
- The company has a Global Environmental Policy and Green Rules⁵ to provide guidelines, facilitate the understanding of and communicate the efforts oriented toward sustainable development.
- The company was one of the founding members of the Cement Sustainability Initiative (CSI) of the World Business Council for Sustainable Development (WBCSD), committing to integrate sustainable development into their business strategies and operations. In 2018, Votorantim Cimentos, along with other CSI-member organizations, transformed CSI into the Global Cement and Concrete Association (GCCA),⁶ to include the concrete segment in the scope of the organization, with an aim to drive responsible industry leadership in manufacturing and the use of cement and concrete.
- Votorantim Cimentos's Sustainability Commitments for 2020 include the following targets:
 - (i) Renewable fuels: reaching 30% level of non-fossil fuels use in the company's cement kilns,
 - (ii) Sustainable products and services: achieving a clinker-to-cement ratio of 72%, and
 - (iii) CO₂ emissions: reducing CO₂ emissions per tonne of cementitious product by 25% compared to the base year (1990 levels).
- In 2018, the company achieved alternative fuel usage rate of 18.5% in its cement kilns; clinker-to-cement ratio of 75.2%; and a CO₂ emissions reduction of 18.6% from 1990 levels.

Sustainalytics is of the opinion that Votorantim Cimentos' sustainability strategy and efforts demonstrate the company's commitment to achieving positive environmental and social impacts. The company's SPTs are aligned with its Eco-Efficiency and Innovation strategic driver. Given Votorantim Cimentos' approach to sustainability, Sustainalytics is of the view that launching a SLL will help to advance the company's overall sustainability strategy.

Section 2: Target Setting

The Sustainability Linked Loan Principles state that appropriate SPTs should be negotiated and set between the borrower and lender for each loan transaction. As outlined in the SLLP, a borrower may elect to tie the interest rate of the loan to improved performance on KPIs associated with the company's material sustainability-related issues. Votorantim Cimentos' SPTs are based on the following KPIs (see Appendix 1 for a detailed definition of each):

Category	KPI ⁷	KPI Definition ⁸	Baseline Date
Alternative Fuels and Greenhouse Gas Emissions	Thermal Substitution Rate (TSR)	Thermal Substitution Rate (TSR) describes the proportion of thermal energy replaced by using alternative fuel sources, such as biomass, and biogenic and non-biogenic wastes.	December 2018

² Votorantim Cimentos. 2018 Integrated Report: <https://www.votorantimcimentos.com.br/download/en/integrated-report.pdf>

³ Votorantim Cimentos, Our Sustainability Commitments for 2020:

[http://www.votorantimcimentos.com/Shared%20Documents/Our%20Sustainability%20Commitments%202020%20\(1\).pdf](http://www.votorantimcimentos.com/Shared%20Documents/Our%20Sustainability%20Commitments%202020%20(1).pdf)

⁴ Votorantim Cimentos has communicated to Sustainalytics that it will be reviewing its sustainability strategy and will outline a new set of long-term goals for the 2020-2030 period. Sustainalytics has a positive view on Votorantim Cimentos' efforts to further strengthen its goals.

⁵ Votorantim Cimentos, Global Environmental Policy and Green Rules:

http://www.votorantimcimentos.com/Shared%20Documents/Cartilha%20Politica%20Ambiental%20e%20Regras%20Verdes_ingles.pdf

⁶ Global Cement and Concrete Association, Purpose & Mission: <https://gccassociation.org/about-us/purpose-mission/>

⁷ Please refer to Appendix 1 for further details on Votorantim Cimentos' KPIs..

⁸ Please refer to Appendix 1 for further details on Votorantim Cimentos' KPIs.

	Clinker-to-Cement ratio	Clinker-to-Cement ratio describes the proportion of total clinker (main ingredient of cement) in the total cement or cementitious product on a mass basis.	December 2018
	Annual (net) direct CO ₂ emissions per tonne of cement	Annual (net) direct CO ₂ emissions per tonne of cementitious product describes total direct carbon emissions from the cement manufacturing, excluding those generated from the co-processing of waste.	December 2018

Sustainalytics' ESG Risk Rating for the Construction Materials subindustry identifies *Carbon - Own Operations* as the most material sustainability issue. The global construction materials subindustry is a major contributor to climate change. The US Energy Information Administration (EIA) recognizes the subindustry as the most energy intensive of all manufacturing industries. Additionally, cement is the second-most consumed resource in the world and its production contributes to approximately 8% of the global CO₂ emissions. To bring the cement industry in line with the Paris Agreement, its annual emissions need to fall by at least 16% by 2030.⁹ According to the International Energy Agency's report,¹⁰ "Technology Roadmap: Low-Carbon Transition in the Cement Industry," in collaboration with CSI, the clinker substitution and fuel switching are two of the identified mitigation levers to achieve compatible CO₂ reductions. In addition to switching to low-carbon (alternative) fuels, achieving an average global clinker ratio by 0.60 by 2050 has the potential to reduce approximately 0.2 gigatons of CO₂ in 2050. It has also been noted that "clinker substitution is not only a very effective solution, but also one that can be deployed cheaply today,"⁹ considering breakthrough mitigation technologies (such as carbon capture and storage) are yet to be economically scaled, globally.

As such, Votorantim Cimentos' selection of KPIs are well-aligned with those identified within the industry for which cement companies need to improve their performances in order to align with the 2-degree scenario by 2050. The KPIs selected by the company are directly linked to the identified issue, and improvements in performance on these KPIs by Votorantim Cimentos will lower the company's carbon emissions intensity and enhance its sustainability more generally. Therefore, on this basis, Sustainalytics is of the opinion that linking improvements to the company's direct CO₂ emissions per tonne of cementitious product, to its loan is credible and appropriate and will contribute to mitigating material environmental risk associated with the company's core business.

The SLLP specify that targets should be based on recent measurements of selected KPI performance. Sustainalytics notes that Votorantim Cimentos' baseline performance (KPI) data were validated by an independent auditor and reported in the company's 2018 Integrated Report by April 2019, falling under the SLLP's suggested time period of data from the previous 6-12 months.

Section 3: Reporting

The SLLP recommends that borrower's make and keep readily available up-to-date information relating to their SPTs. Votorantim Cimentos is demonstrating good practice by publicly disclosing its KPIs (achieved and targeted) through its annual integrated reporting which will include an annually audited statement specifying the realized score for each KPI. Votorantim Cimentos has committed to deliver the KPI reporting to the Administrative Agent and Sustainability Coordinator for the reporting no later than 150 days after each December 31 of the applicable year.

⁹ Chatham House, The Royal Institute of International Affairs, Making Concrete Change: Innovation in Low-carbon Cement and Concrete: <https://reader.chathamhouse.org/making-concrete-change-innovation-low-carbon-cement-and-concrete#>

¹⁰ WBCSD, Technology Roadmap: Low-Carbon Transition in the Cement Industry: <https://www.wbcsd.org/Sector-Projects/Cement-Sustainability-Initiative/Resources/Technology-Roadmap-Low-Carbon-Transition-in-the-Cement-Industry>

Section 4: Review

Votorantim Cimentos will utilize its internal system for data extraction in order to assess KPIs based on the CSI standard worksheet. Additionally, the company has an internal validation process for KPI data as performed by the Sustainability, Processes, and Controllership Departments with external verification conducted by an independent third-party auditor. The company has also communicated to Sustainalytics that any changes in KPI calculation methodology will be communicated to all relevant stakeholders, and if commonly agreed, will be changed and disclosed for the following year(s).

Sustainalytics believes that Votorantim Cimentos' external assurance practices, along with the involvement of a cross-functional team for data extraction and internal validation, enhance credibility and transparency of underlying information linked to the company's SPT.

Conclusion

Sustainalytics is of the opinion that Votorantim Cimentos' SLL will support the company's overall sustainability strategy and efforts to contribute to the low-carbon transition of the cement industry. In addition, the use of KPIs associated with the company's material sustainability-related issues as a basis for target-setting is recognized as credible by the Sustainability Linked Loan Principles, and the borrower has committed to disclosing progress against their SPT on an annual basis. Based on the above considerations, Sustainalytics is of the opinion that Votorantim Cimentos' SLL is aligned with the SLLP.

Appendix 1: Votorantim Cimentos' Key Performance Indicators (Metrics)

- **Thermal Substitution Rate (TSR)**¹¹ describes the proportion of thermal energy replaced by using alternative fuel sources, such as biomass, and biogenic and non-biogenic wastes. The primary purpose of achieving higher thermal substitution rate is to displace fossil fuel consumption, mainly coal and petroleum coke, in cement kilns.
- **Clinker-to-Cement ratio**¹² describes the proportion of total clinker (main ingredient of cement) in the total cement or cementitious product on a mass basis. The lower ratio signifies lower carbon emissions generated in cement manufacturing, due to both (i) the combustion of fuels, and (ii) the decomposition of limestone in the clinker production process. The substitution of clinker with other cementitious materials that are by-products of other industrial processes, such as coal fly ash,¹³ can replace the need to create additional clinker and could result in lowering carbon emissions from cement manufacturing process.
- **Annual (net) direct CO₂ emissions per tonne of cementitious products** describes total direct carbon emissions from the cement manufacturing, excluding those generated from the co-processing of waste.

According to the IEA's "Technology Roadmap report"¹⁰, in collaboration with CSI, the intended realization of 2-degree Celsius Scenario (low variability case) implies significant reduction of direct carbon emissions from cement manufacturing by 2050, and includes monitoring of specific key indicators for the global cement industry, including but not limited to:

- i. the reduction of clinker-to-cement ratio to 0.64 by 2030 and 0.60 by 2050 from 0.65 (2014);
- ii. the increase of alternative fuel use (% of thermal energy) by 17.5% by 2030 and 30% by 2050 from 5.6% (2014); and
- iii. the reduction of direct (process and energy-related) CO₂ intensity of cement (tCO₂ per t cement) to 0.52 by 2030 and 0.37 by 2050 from 0.54 (2014).

With respect the importance that the IEA's report, and underlying its vision, places on improvement in, among other things, the three key performance indicators for the global cement industry, Votorantim Cimentos' SPTs are well-aligned with the sustainability objectives of low-carbon transition in the cement industry.

¹¹ International Finance Corporation, Increasing the Use of Alternative Fuels at Cement Plants: International Best Practice: https://www.ifc.org/wps/wcm/connect/bb652356-1d43-4421-b7eb-e0034d8d6b8f/Alternative+Fuels_06+27.pdf?MOD=AJPERES

¹² IEA, Cement- Tracking Clean Energy Progress: <https://www.iea.org/tcep/industry/cement/#clinker>

¹³ Energy Policy Solutions, Cement Clinker Substitution: <https://us.energypolicy.solutions/docs/cement-clinker-substitution.html>

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