

Second-Party Opinion

Raízen Green Financing Framework



Evaluation Summary

Sustainalytics is of the opinion that the Raízen Green Financing Framework is credible and impactful and aligns with the four core components of the Green Bond Principles 2021 and the Green Loan Principles 2023. This assessment is based on the following:



USE OF PROCEEDS The eligible categories for the use of proceeds Renewable Energy, Energy Efficiency and Clean Transportation are aligned with those recognized by the Green Bond Principles and the Green Loan Principles. Sustainalytics considers that investments in the eligible categories will lead to positive environmental impacts and advance the UN Sustainable Development Goals, specifically SDGs 7, 9, 11 and 12.



PROJECT EVALUATION AND SELECTION Raízen’s senior management team, comprising CEO and CSO of the company will evaluate and select proposed projects according to the criteria outlined in the Framework. All projects financed under the Framework will undergo an assessment process to ensure the environmental and social risks associated with the projects are addressed and that they are aligned with Raízen’s internal policies. Sustainalytics considers the project selection process in line with market practice.



MANAGEMENT OF PROCEEDS Raízen’s senior management will oversee the management and allocation of proceeds through a portfolio approach. Raízen intends to allocate net proceeds within 36 months of each issuance. Pending full allocation, unallocated proceeds will be held in cash, cash equivalents or money market funds in Raízen’s treasury liquidity portfolio. In case of multi-tranche loan facilities, Raízen will label only those tranches where proceeds will be fully allocated to assets and activities that are eligible under the Framework This is in line with market practice.



REPORTING Raízen commits to report on allocation of proceeds on its website on an annual basis, until the maturity of the instruments issued under the Framework. Allocation reporting will include metrics such as the amount of proceeds allocated to each project, repayment, refinancing and future expenditures per operation and the amount of temporary allocation. In addition, Raízen Energia SA has communicated to Sustainalytics that it intends to report on relevant impact metrics, such as avoided emissions from the financed projects (tCO₂e) and energy/power generation (kWh/MwH or GJ/TJ). Sustainalytics views Raízen’s allocation and impact reporting as aligned with market practice.

Evaluation date	September 4, 2024 ¹
Issuer Location	São Paulo, Brazil

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¹ This document updates the Second-Party Opinion originally provided by Sustainalytics in August 2022.

Introduction

Raízen Energia SA (“Raízen” or the “Company”) is a joint venture formed in 2010 in Brazil from the merger of Cosan SA and Royal Dutch Shell Plc. The Company uses sugarcane to produce sugar, ethanol and electricity from straw and waste bagasse, and owns and operates fuel distribution facilities in Brazil, Argentina and Paraguay. Headquartered in Brazil, Raízen operates 35 bioenergy parks and 8,000 gas stations, with a workforce of 45,000 employees, and serves across more than 50 countries, exporting sugar and ethanol.²

Raízen has developed the Raízen Green Financing Framework (the “Framework”) under which it and its subsidiaries or affiliates³ intend to issue green bonds, loans and other debt instruments,⁴ and use the proceeds to finance or refinance, in whole or in part, existing and future projects expected to support the Company’s initiatives for expanding its clean energy portfolio. The Framework defines eligibility criteria in three areas:

1. Renewable Energy
2. Energy Efficiency
3. Clean Transportation

Raízen engaged Sustainalytics to review the Framework dated September 2024 and provide a Second-Party Opinion on the Framework’s environmental credentials and its alignment with the Green Bond Principles 2021 (GBP)⁵ and the Green Loan Principles 2023 (GLP).⁶ The Framework will be published in a separate document.⁷

Scope of work and limitations of Sustainalytics’ Second-Party Opinion

Sustainalytics’ Second-Party Opinion reflects Sustainalytics’ independent⁸ opinion on the alignment of the reviewed Framework with current market standards and the extent to which the eligible project categories are credible and impactful.

As part of the Second-Party Opinion, Sustainalytics assessed the following:

- The Framework’s alignment with the Green Bond Principles 2021, as administered by ICMA, and the Green Loan Principles 2023, as administered by LMA, APLMA and LSTA;
- The credibility and anticipated positive impacts of the use of proceeds; and
- The alignment of the issuer’s sustainability strategy and performance and sustainability risk management in relation to the use of proceeds.

For the use of proceeds assessment, Sustainalytics relied on its internal taxonomy, version 1.17.2, which is informed by market practice and Sustainalytics’ expertise as an ESG research provider.

As part of this engagement, Sustainalytics held conversations with various members of Raízen’s management team to understand the sustainability impact of its business processes and planned use of proceeds, as well as the management of proceeds and reporting aspects of the Framework. Raízen representatives have confirmed that: (1) they understand it is the sole responsibility of Raízen to ensure that the information provided is complete, accurate and up to date; (2) that they have provided Sustainalytics with all relevant information and (3) that any provided material information has been duly disclosed in a timely manner. Sustainalytics also reviewed relevant public documents and non-public information.

This document contains Sustainalytics’ opinion of the Framework and should be read in conjunction with that Framework.

Any update of the present Second-Party Opinion will be conducted according to the agreed engagement conditions between Sustainalytics and Raízen.

² Raízen, “Integrated Report Crop Year 23’24”, (2023), at: <https://www.raizen.com.br/items-files/item-1212-relatorio-raizen-2023-en-1508.pdf>

³ For issuances by Raízen’s subsidiaries and affiliates, the Company has communicated to Sustainalytics that it will be responsible for ensuring continual alignment of such issuances with the criteria defined in the Framework.

⁴ Sustainalytics has reviewed just those financial instruments that are specified in the Framework.

⁵ The Green Bond Principles are administered by the International Capital Market Association and are available at <https://www.icmagroup.org/green-social-and-sustainability-bonds/green-bond-principles-gbp/>.

⁶ The Green Loan Principles are administered by the Loan Market Association, Asia Pacific Loan Market Association and Loan Syndications and Trading Association and are available at <https://www.lsta.org/content/green-loan-principles/>

⁷ The Raízen Green Financing Framework will be available at: <https://ri.raizen.com.br/en/disclosures-and-documents/green-bond/>

⁸ When operating multiple lines of business that serve a variety of client types, objective research is a cornerstone of Sustainalytics and ensuring analyst independence is paramount to producing objective, actionable research. Sustainalytics has therefore put in place a robust conflict management framework that specifically addresses the need for analyst independence, consistency of process, structural separation of commercial and research (and engagement) teams, data protection and systems separation. Last but not the least, analyst compensation is not directly tied to specific commercial outcomes. One of Sustainalytics’ hallmarks is integrity, another is transparency.

Sustainalytics' Second-Party Opinion, while reflecting on the alignment of the Framework with market standards, is no guarantee of alignment nor warrants any alignment with future versions of relevant market standards. Furthermore, Sustainalytics' Second-Party Opinion addresses the anticipated impacts of eligible projects expected to be financed with bond and loan proceeds but does not measure the actual impact. The measurement and reporting of the impact achieved through projects financed under the Framework is the responsibility of the Framework owner.

In addition, the Second-Party Opinion opines on the potential allocation of proceeds but does not guarantee the realised allocation of the bond and loan proceeds towards eligible activities.

No information provided by Sustainalytics under the present Second-Party Opinion shall be considered as being a statement, representation, warrant or argument, either in favour or against, the truthfulness, reliability or completeness of any facts or statements and related surrounding circumstances that Raízen has made available to Sustainalytics for the purpose of this Second-Party Opinion.

Sustainalytics' Opinion

Section 1: Sustainalytics' Opinion on the Raízen Green Financing Framework

Sustainalytics is of the opinion that the Raízen Green Financing Framework is credible, impactful and aligned with the four core components of the GBP and GLP. Sustainalytics highlights the following elements of the Framework:

- Use of Proceeds:
 - The eligible categories, Renewable Energy, Energy Efficiency and Clean Transportation are aligned with those recognized by the GBP and GLP.
 - Raízen has established a look-back period of 36 months for its refinancing activities, which Sustainalytics views to be in line with market practice.
 - Under the Renewable Energy category, Raízen may finance or refinance the development, construction, remodelling, operation and maintenance of the following renewable energy production facilities; labor costs and equipment purchases associated with these facilities and procurement and production of feedstock that are exclusively used as inputs for the financed facilities under the Framework:
 - First and second-generation biofuel production facilities that produce ethanol from sugarcane, straw and bagasse where for first-generation feedstock, Raízen has communicated to Sustainalytics that lifecycle emissions of the facilities will be at least 65% lower than the respective fossil fuel baseline.⁹ The Framework requires the non-waste feedstock used in the production process to meet the following criteria¹⁰: i) production of the feedstock will not take place on land with high biodiversity (at least within last 10 years); ii) land with a high amount of carbon have not been converted for biofuel feedstock production and iii) the feedstock produced will not compete with food and feed production in the region. Further, Raízen may use certifications such as ISCC,¹¹ Bonsucro¹² or other equivalent schemes, to ensure sustainable sourcing of the feedstock. Sustainalytics encourages the issuer to pursue third-party certifications to validate the sustainability credentials of all the feedstock used in biofuel production process and specify all eligible schemes it intends to use.
 - Cogeneration units that use byproducts of the ethanol production process as feedstock, with lifecycle emissions of the facilities below 100 gCO₂e/kWh (power and heat combined).
 - Biodigestion facilities that use industrial sugarcane residues such as filter cake and vinasse as feedstock for power generation or production of biomethane through biogas.

⁹ Fossil fuel baseline for biofuels used in transportation: 94 gCO₂e/MJ.

¹⁰ Please refer to the Framework for details of the non-waste feedstock criteria.

¹¹ ISCC Plus: <https://www.iscc-system.org/certification/iscc-certification-schemes/iscc-plus/>

¹² Bonsucro: <https://bonsucro.com/what-is-certification/>

- Distributed solar PV and concentrated solar power (CSP) generation units where more than 85% of the electricity generated from the CSPs are derived from solar energy.
- Sustainalytics considers investments under this category to be aligned with market practice.
- Under the Energy Efficiency category, Raízen may finance or refinance expenditures related to improving energy efficiency of the bioenergy facilities financed under the Framework including purchase of energy efficient equipment for those facilities.
 - The Company has confirmed to Sustainalytics that the equipment purchased will be powered by renewable energy.
 - Sustainalytics considers investments under this category to be aligned with market practice.
- Under the Clean Transportation category, Raízen may finance or refinance the installation of fast electric charging stations with certified¹³ 100% renewable energy.
 - The Company has confirmed to Sustainalytics that parking facilities will be excluded from financing of EV charging infrastructure.
 - Sustainalytics considers investments under this category to be aligned with market practice.
- Sustainalytics notes that Raízen will not extend financing to projects or assets that use fossil feedstock or are associated with environmentally harmful resource extraction and businesses that are associated with child labor, that subject their employees to degrading conditions or conditions analogous to slavery or do not operate in compliance with Brazilian Federal Law 12.846/2013 (Anti-Corruption Law).
- Project Evaluation and Selection:
 - Raízen's leadership team will propose credible projects according to the eligibility criteria outlined in the Framework. The senior management team, including the CEO and CSO of the Company, will evaluate and select proposed projects on an annual basis.
 - All projects financed under the Framework will undergo an assessment process to ensure all environmental and social risks associated with them are addressed and that they are aligned with the Company's Corporate and Regulatory Governance, Sustainability, and Compliance Policies as well as the Health, Safety, and Environment Policy. Sustainalytics considers these environmental and social risk management systems to be adequate. For additional details, refer to Section 2.
 - Based on the established processes for project evaluation and selection and the presence of a risk management system, Sustainalytics considers this process to be in line with market practice.
- Management of Proceeds:
 - Raízen will use a portfolio approach for allocation to eligible projects and assets ('Eligible Green Portfolio') from the proceeds of instruments issued under the Framework. The Company's senior management team will be responsible for monitoring the Eligible Green Portfolio and replenishing the pool of credible assets, they are removed from the portfolio for any reason.
 - The Company intends to achieve full allocation within 36 months of issuance on a best-effort basis, observing the maturity date of the instruments. Pending full allocation, unallocated proceeds will be held in cash, cash equivalents or money market funds in Raízen's treasury liquidity portfolio.
 - Sustainalytics notes that Raízen may obtain multi-tranche loan facilities under the Framework and that the Company intends to label only those tranches of such facilities where proceeds will be fully allocated to assets and activities that are eligible under the Framework.
 - Based on the disclosure of responsible parties for tracking the allocation and of temporary use of proceeds, Sustainalytics considers this process to be in line with market practice.
- Reporting:
 - Raízen will report on allocation and impact of proceeds in consolidated reports to be published on its website on an annual basis, until the maturity of the instruments issued under the Framework. The reports will be modified in case of any relevant change in the Eligible Green Portfolio, in a timely manner.
 - Allocation reporting will include the volume of proceeds allocated to each project, repayment, refinancing and future expenditures per operation, the amount of temporary allocation, project implementation status and expected completion dates.

¹³ Raízen has communicated to Sustainalytics that renewable energy powering the EV charging stations will be certified by I-RECs (International Renewable Energy Certificates).

- The Company has communicated to Sustainalytics that impact reporting will include relevant impact metrics per project such as annual emissions avoided (ton CO₂e), annual renewable energy generation (MWh/GWh or GJ/TJ), share of biofuel covered by credible certificates (%), energy consumption per ton of sugarcane (MWh/GWh or GJ/TJ) and number of electric vehicle charging stations installed. The impact report will also include a methodology section, baselines and assumptions used in impact analysis.
- Based on the commitment to allocation and impact reporting, Sustainalytics considers this process to be in line with market practice.

Alignment with the Green Bond Principles 2021 and Green Loan Principles 2023

Sustainalytics has determined that the Raízen Green Financing Framework aligns with the four core components of the GBP and GLP.

Section 2: Sustainability Strategy of Raízen

Contribution to Raízen's sustainability strategy

Raízen's sustainability strategy is based on five key priorities: i) agricultural productivity and efficiency; ii) mobility; iii) second generation ethanol; iv) new renewable products; and v) power.¹⁴ As part of Raízen's commitment to energy and climate transition, Raízen has set targets to expand renewables capabilities, reduce its carbon footprint and support emission reductions for its customers. By 2030, Raízen aims to: i) increase renewable energy production by 80% compared to a 2021 baseline; ii) reduce carbon footprint of ethanol and sugar by 20% compared to a 2018 baseline; iii) derive 80% of EBITDA from renewable business compared to a 2021 baseline; and iv) reduce the carbon intensity of products sold by 10% compared to a 2021 baseline.¹⁵ With regard to agricultural management and biodiversity, Raízen commits to increasing energy generation per harvested area (GJ/ha) by 15% by 2030 compared to a 2018 baseline, and ensuring the traceability of 100% of the volume of sugarcane crushed by 2030 compared to a 2018 baseline.¹⁶ Regarding sustainable procurement, Raízen commits to: i) monitoring 100% of critical suppliers through a recognized methodology and ensuring all suppliers adhere to the Company's minimum sustainability criteria by 2030; ii) guaranteeing 100% of sugarcane sources are covered by an internationally recognized sustainability standard by 2030 and iii) obtaining and maintaining certification to an internationally recognized standard for all units in operation by 2030.¹⁷

To achieve these targets, Raízen will aim to enhance operational efficiency and minimize the use of inputs that will result in increased scope 1 GHG emissions. In particular, Raízen will make efforts to increase the use of vinasse and filter cake, replace synthetic nitrogen with biological alternatives, implement smart rotating technologies, retrofit fleets to natural gas, increase biomass usage, expand the production of renewables, and amplify positive agricultural practices.¹⁸ Over the next few years, Raízen intends to allocate more than 80% of its CAPEX to renewable products, in an effort to meet the abovementioned targets. In addition, the Company is contemplating to set up large-scale carbon capture and storage projects in order to mitigate the greenhouse gas emissions from its production process. The Company has adopted an Environmental Management Plan (EMP) for all its certified operations, in accordance with the Bonsucro Standard. The EMP establishes objectives, goals and measures related to the environmental aspects of its operations, such as biodiversity, soil, air and water.¹⁹ Raízen is also a member of the CDP Supply Chain engagement through which the Company works with its suppliers to manage scope 3 emissions and climate-related risks.²⁰ Raízen discloses its sustainability performance in line with the TCFD recommendations and the Global Reporting Initiative Standards.²¹

Sustainalytics is of the opinion that the Raízen Green Financing Framework is aligned with the Company's overall sustainability strategy and initiatives and will further the Company's action on its key environmental priorities.

Raízen's Environmental and Social Risk Management

Sustainalytics recognizes that the net proceeds from instruments issued under the Framework will be directed towards eligible projects that are expected to have positive environmental impacts. However, Sustainalytics

¹⁴ Raízen, "Sustainability Strategy", at: <https://www.raizen.com.br/en/sustainability/strategy>

¹⁵ Raízen, "Targets and Performance", at: <https://www.raizen.com.br/en/sustainability/public-commitments>

¹⁶ Ibid.

¹⁷ Ibid.

¹⁸ Raízen, "Disclosures Hub", at: <https://www.raizen.com.br/en/sustainability/public-commitments/disclosures-hub>

¹⁹ Ibid.

²⁰ Ibid.

²¹ Raízen, "Integrated Report", at: <https://www.raizen.com.br/items-files/item-1212-relatorio-raizen-2023-en-1508.pdf>

is aware that such eligible projects could also lead to negative environmental and social outcomes. Some key environmental and social risks possibly associated with the eligible projects may include issues related to community relations, labour rights, human rights within the supply chain, water use, waste and procurement.

Sustainalytics is of the opinion that Raízen is able to manage and/or mitigate potential risks through the implementation of the following:

- Raízen has a Sustainability Policy that applies to all businesses and employees in all its business units. The policy intends to transparently communicate to stakeholders the Company's ambitions and actions toward sustainable development. In addition, the policy addresses several sustainability themes, including energy efficiency, climate change, water management, community relations, human rights, diversity, land use and sustainable sugarcane procurement.²²
- Additionally, Raízen's Health, Safety, and Environment (HSE) Policy promotes health, safety, environmental preservation, and asset integrity in its operations. The policy includes setting standards and conducting regular performance evaluations. The policy guidelines are communicated systematically to all team members through active participation, mandatory training, and awareness programmes that are coordinated by the Company's Executive Committee. This approach ensures that Raízen employees as well as its suppliers and business partners adhere to the policy requirements.^{23,24}
- To address risks related to community relations, Raízen has adopted a Social Performance Policy that focuses on the identification, evaluation, prevention and mitigation of negative social impacts on communities located within the areas of influence of its operations. The policy ensures that appropriate dialogue channels are established with these communities through participation in committees and local discussion forums, and that the community concerns are adequately addressed. Further, the Company relies on its Relations with Indigenous People Policy to ensure that Indigenous peoples' rights and traditional practices are respected, and the land and territories of Indigenous peoples are considered in the decision-making process for new businesses and expansions.^{25,26}
- Raízen's Sustainability Policy and HSE Policy, in conjunction with its Code of Conduct, ensure that risks associated with human rights issues are sufficiently addressed throughout its operations and supply chain.²⁷ The Company's Elos Program further mitigates human rights-related risks by promoting sustainable practices among its suppliers.²⁸ Additionally, Raízen's Human Rights Policy establishes guidelines to respect and promote human rights across all business activities and relationships, and measures to prevent and address any potential adverse impacts on human rights.²⁹ The Company's Ethics Channel, managed by an independent third party, provides a confidential service for reporting violations of the Code of Conduct and internal policies, supporting Raízen's commitment to ethical standards.³⁰
- Regarding the efficient use of water, the Company has implemented the Reduza programme that has been in place since the 2015-16 harvest year. This initiative focuses on condensing the water evaporated after sugarcane crushing for use in the industry, helping the Company reduce water consumption per tonne of sugarcane crushed and reuse hot water in boilers. As of the 2023-2024 crop year period, Raízen had saved over 17 billion liters of water through the Reduza programme, contributing to the Company's sustainability goals to reduce water withdrawals from its operations by 15% by 2030.³¹
- Regarding waste management risks, Raízen developed a waste management programme that sets internal procedures, including awareness campaigns to ensure that all employees understand the importance of managing and reducing waste. In addition, the Company employs an Integrated Operations Management System, which manages effluents, waste, air emissions, and environmental permits, alongside an Environmental Management Plan and a Solid Waste Management Plan. The

²² Raízen, "Sustainability Policy", (2023), at: <https://s3-sa-east-1.amazonaws.com/raizen-prod/items-files/item-391-sustainability-policy-2024.pdf>

²³ Raízen, "Code of Conduct", at: <https://s3-sa-east-1.amazonaws.com/raizen-prod/page-content-files/session-40-code-of-conduct.pdf>

²⁴ Raízen, "HSSE Policy", at: <https://s3-sa-east-1.amazonaws.com/raizen-prod/items-files/item-185-351-hsse-policy-raizen.pdf>

²⁵ Raízen, "Performance Social", at: <https://s3-sa-east-1.amazonaws.com/raizen-prod/items-files/item-394-plt10-performance-social-s2223-vf.pdf>

²⁶ Raízen, "Relacionamento com Povos Indígenas", at: <https://s3-sa-east-1.amazonaws.com/raizen-prod/items-files/item-641-plt31-politica-de-relacionamento-com-povos-indigenas.pdf>

²⁷ Raízen, "Third Party Policies and Procedures", (2021), at: <https://www.raizen.com.br/en/about-raizen/third-party-policies-and-procedures>

²⁸ Raízen, "elos Raízen 2022/2023 Impact Report", at: https://www.raizen.com.br/relatorioanual/elos/2023/assets/pdf/Raizen_Programa_Elos_RI_2022_2023_EN.pdf

²⁹ Raízen, "Human Rights Policy", (2023), at: <https://s3-sa-east-1.amazonaws.com/raizen-prod/items-files/item-774-human-rights-policy.pdf>

³⁰ Raízen, "Code of Conduct", at: <https://s3-sa-east-1.amazonaws.com/raizen-prod/page-content-files/session-40-code-of-conduct.pdf>

³¹ Raízen, "Integrated Report Crop Year 23'24", (2023), at: <https://www.raizen.com.br/items-files/item-1212-relatorio-raizen-2023-en-1508.pdf>

Company invests in effluent and wastewater treatment plants to improve the quality of discharged effluents. To further reduce effluent generation, Raízen also invests in technology for water reuse, process monitoring, and the closing of circuits and cooling towers for water reuse. Raízen has implemented an Environmental Management Plan with specific actions to minimize environmental impacts. This includes using mill by-products like vinasse and filter cake as natural fertilizers, which reduces the need for synthetic fertilizers and helps manage land use and biodiversity impacts.³²

- Raízen has a Sustainable Procurement Policy to ensure an efficient procurement process that adheres to principles of compliance and sustainability for fair and honest competitive processes. The policy integrates environmental, social, and economic aspects into the procurement of equipment, materials and services, ensuring that all procurement activities align with Raízen's Strategic Sustainability Plan. This policy mandates that all suppliers comply with Raízen's Code of Conduct, the HSE Manual for Contractors, and the General Supply Conditions Agreement, covering various criteria such as financial, legal, labor, and socio-environmental aspects.³³

Based on these policies, standards and assessments, Sustainability is of the opinion that Raízen has implemented adequate measures and is well positioned to manage and mitigate environmental and social risks commonly associated with the eligible categories.

Section 3: Impact of Use of Proceeds

The Role of Solar Power and Biofuels in Brazil's Transition to a Low-carbon Economy

Renewable energy generation accounted for 87.7% of the grid mix in Brazil in 2022.³⁴ The same year, Brazil ranked 8th worldwide in terms of installed solar power, with a total of 24 gigawatts (GW).³⁵ The total installed solar power in Brazil generated approximately 5.6% of the country's electricity demand in 2022, compared to 2.8% in 2021.³⁶ In 2023, the pace of growth in solar capacity accelerated with a 49% rise annually, reaching 37.7 GW, which was supported by government incentives, cost-competitive equipment and deployment of distributed solar energy, with a 70% share in total solar capacity.³⁷ Brazil has committed to reach up to 90 GW installed PV capacity by 2050. In line with these goals, Brazil's MME and the state-run Energy Research Office (EPE) continue to advance the National Energy Plan.³⁸

In the case of biofuels, the share of renewables in Brazil's transport sector energy mix was around 22% in 2022, nearly six times the global average of 3.7%.³⁹ Since the 1970s, sugarcane has grown and diversified as a source of energy in Brazil, encompassing ethanol, electricity and biogas.⁴⁰ Furthermore, in 1975, Brazil introduced the Programa Nacional do Álcool (Proálcool), which set mandatory ethanol blends for gasoline in the country at up to 25%.⁴¹ As of 2018, Brazil had increased its mandatory ethanol blend to 27% for all gasoline and majority of the vehicles in the country could operate on ethanol fuel alone because of the widely successful adoption of flex-fuel vehicles.^{42,43} In the last decade, further financing support for new sugarcane plantations and fiscal incentives reducing bioethanol taxes at pumping stations have helped bioethanol remain relevant in Brazil's transport sector.⁴⁴

In 2015, the Brazilian government reinforced its commitment to the decarbonization pathway at the United Nations Climate Change Conference in Paris through a Nationally Determined Contribution to reduce its

³² Ibid.

³³ Raízen, "Política de compras sustentáveis", at: <https://s3-sa-east-1.amazonaws.com/raizen-prod/items-files/item-611-sustainable-purchasing-policy-trad-ingles.pdf>

³⁴ Iea 50, "Brazil", at: <https://www.iea.org/countries/brazil/renewables>

³⁵ Global Solar Council, "Brazil accelerates in solar PV energy and becomes the eighth largest country in the world ranking of the source, informs ABSOLAR", (2023), at: <https://www.globalsolarcouncil.org/news/brazil-accelerates-in-solar-pv-energy-and-becomes-the-eighth-largest-country-in-the-world-ranking-of-the-source-informs-absolar/>

³⁶ Iea 50, "Brazil", at: <https://www.iea.org/countries/brazil/renewables>

³⁷ Dialogue Earth, "Solar power is booming in Brazil. Can it be a boom for all?", at: <https://dialogue.earth/en/energy/solar-power-is-booming-in-brazil-can-it-be-a-boom-for-all/>

³⁸ InterSolar, "Brazil's 2050 National Energy Plan: Up to 90 GW of Installed PV Capacity until 2050", at: <https://www.intersolar.net.br/news/brazils-2050-national-energy-plan-pv-capacity>

³⁹ Energy Institute, "Big in biofuels: a Brazil success story", (2023), at: <https://knowledge.energyinst.org/new-energy-world/article?id=138477>

⁴⁰ Global Issues, "Green Gas: Energy as a By-Product of Sugarcane in Brazil", (2021), at: <https://www.globalissues.org/news/2021/12/20/29647>

⁴¹ Cortez, L. et al. (2016), "40 Years of the Brazilian Ethanol Program (Proálcool): Relevant Public Policies and Events Throughout Its Trajectory and Future Perspectives", at: https://bioenfapesp.org/gsb/lacaf/documents/papers/05_ISAF_2016_Cortez_et_al.pdf

⁴² Rapid Transition Alliance, "The Rise of Brazil's Sugarcane Cars" (2018), at: <https://www.rapidtransition.org/stories/the-rise-of-brazils-sugarcane-cars/>

⁴³ Wessex Institute of Technology Press, "The Brazilian experience of flex-fuel vehicles technology: towards low carbon mobility", (2014), at: <https://www.witpress.com/Secure/elibrary/papers/UT14/UT14045FU1.pdf>

⁴⁴ International Renewable Energy Agency (IRENA), "Renewable Energy Policy Brief: BRAZIL", (2015), at: https://www.irena.org/-/media/Files/IRENA/Agency/Publication/2015/IRENA_RE_Latin_America_Policies/IRENA_RE_Latin_America_Policies_2015_Country_Brazil.pdf?la=en&hash=D645B3E7B7DF03BDDAF6EE4F35058B2669E132B1

emissions in 2030 by 43% compared to 2005. In addition, Brazil intends to adopt further measures that are consistent with the 2°C climate scenario, in particular, increasing its share of renewables in the energy mix to 45%, in which biofuels would increase to approximately 18% by 2030.⁴⁵ In 2023, Brazil exceeded its target as the renewable energy sources accounted for 49.1% of the national energy matrix, up from 45% in 2021.⁴⁶ This growth follows the 2018 achievement where biofuels contributed 18.9% to the energy mix – 17.4% from sugarcane products and 1.5% from biodiesel. The increase in renewables is largely due to developments in wind, solar, and biomass energy.⁴⁷

In this context, Sustainalytics considers Raízen’s investments in renewable energy, especially solar and biofuels as contributing to Brazil’s transition to a low-carbon economy.

Contribution to SDGs

The Sustainable Development Goals (SDGs) were adopted in September 2015 by the United Nations General Assembly and form part of an agenda for achieving sustainable development by the year 2030. The Raízen Green Financing Framework is expected to help advance the following SDGs and targets:

Use of Proceeds Category	SDG	SDG target
Renewable Energy	7. Affordable and clean energy	7.2 By 2030, increase substantially the share of renewable energy in the global energy mix
	12. Responsible consumption and production	12.2 By 2030, achieve the sustainable management and efficient use of natural resources
Energy Efficiency	9. Industry, innovation and infrastructure	9.4 By 2030, upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes, with all countries taking action in accordance with their respective capabilities
Clean Transportation	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, persons with disabilities and older persons

Conclusion

Raízen has developed the Raízen Green Financing Framework under which it and its subsidiaries or affiliates may issue green bonds, loans and other financial instruments, and use the proceeds to finance or refinance, in whole or in part, existing or future projects related to renewable energy, energy efficiency and clean transportation, that are expected to support the Company’s initiatives for expanding its clean energy portfolio. Sustainalytics considers that the projects funded by the proceeds are expected to provide a positive environmental impact.

⁴⁵ UNFCCC, “Federative Republic of Brazil – Intended Nationally Determined Contribution Towards Achieving the Objective of the United Nations Framework Convention on Climate Change”, (2015), at: <https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Brazil%20First/BRAZIL%20iNDC%20english%20FINAL.pdf>

⁴⁶ Government of Brazil, “Renewable sources now have a share of 45.3% in Brazil’s energy mix”, (2021), at: <https://www.gov.br/en/government-of-brazil/latest-news/2021/04/renewable-sources-now-have-a-share-of-45-3-in-brazil2019s-energy-mix>

⁴⁷ Brazilian NR, “Renewable Energy in Brazil Reaches 49.1% of Energy Matrix”, (2024), at: <https://braziliannr.com/2024/06/22/renewable-energy-in-brazil-reaches-49-1-of-energy-matrix/>

The Raízen Green Financing Framework outlines a process for tracking, allocation and management of proceeds, and makes commitments for reporting on allocation and impact. Sustainalytics considers that the Raízen Green Financing Framework is aligned with the overall sustainability strategy of Raízen and that the use of proceeds will contribute to the advancement of the UN Sustainable Development Goals 7, 9, 11 and 12. Additionally, Sustainalytics is of the opinion that Raízen has adopted adequate measures to identify, manage and mitigate environmental and social risks commonly associated with the eligible projects.

Based on the above, Sustainalytics is confident that Raízen Energia SA is well positioned to issue green bonds and green loans and that the Raízen Green Financing Framework is robust, transparent and in alignment with the four core components of the Green Bond Principles 2021 and Green Loan Principles 2023.

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