

Second-Party Opinion

Raízen Green Financing Framework



Evaluation Summary

Use of Proceeds Instruments

Green Bond Principles 2021 and Green Loan Principles 2021

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 Green Loan Principles 2021 (the “Use of Proceeds Principles”). The eligible categories for the use of proceeds – Renewable energy and Energy Efficiency – are aligned with those recognized by the Use of Proceeds Principles. Sustainalytics considers that investments in the eligible categories will lead to positive environmental impacts by increasing the availability of clean energy in Brazil.

Climate Transition Finance Handbook

Sustainalytics has evaluated Raízen’s transition governance, strategy, decarbonization targets, and intentions to report on transition progress and finds the Company to be partially aligned with the recommendations of the Climate Transition Finance Handbook 2020. Raízen has adopted medium-term targets for its biofuel operations and is currently working on developing its long-term climate strategy. However, Sustainalytics notes that Raízen has not yet developed targets related to its fossil fuel distribution operations.

Evaluation Date	August 15, 2022
Issuer/Borrower Location	São Paulo, Brazil

The UoPs contribute to the following SDGs:



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Scope of Work and Limitations

Sustainalytics' Second-Party Opinion reflects Sustainalytics' independent¹ opinion on the alignment of the Raízen Green Financing Framework with current market standards. As part of the Second-Party Opinion, Sustainalytics assessed the following:

- The Framework's alignment with the Green Bond Principles 2021 as administered by ICMA² and the Green Loan Principles 2021, as administered by LMA, APLMA and LSTA;³
- The credibility and anticipated positive impacts of the use of proceeds;
- The issuer's sustainability strategy, performance and sustainability risk management; and
- The alignment with the recommendations of the Climate Transition Finance Handbook 2021;⁴

As part of this engagement, Sustainalytics held conversations with various members of Raízen's management team to understand the sustainability impact of their business processes and the core components 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 or up to date;
- (2) They have provided Sustainalytics with all relevant information; and
- (3) 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. Sustainalytics' Second-Party Opinion assesses alignment of the Framework with current market standards but does not provide any guarantee of alignment nor warrants alignment with any future versions of such standards. Regarding the portion of the Second-Party Opinion which assesses:

- use of proceeds categories, Raízen is encouraged to update the associated parts of the Framework after 24 (twenty-four) months from the evaluation date, if necessary, and seek an update to this Second-Party Opinion to ensure ongoing alignment of the Framework with market standards and expectations.

For use of proceeds instruments, Sustainalytics relied on its internal taxonomy, version 1.11, which is informed by market practice and Sustainalytics' expertise as an ESG research provider. This Second-Party Opinion:

- addresses the anticipated impacts of eligible projects but does not measure their actual impact. Reporting and measuring impact of projects financed under the Framework is the responsibility of the Framework owner.
- opines on the potential allocation of proceeds but does not guarantee their realized allocation towards eligible activities.

No information Sustainalytics provides under the present Second-Party Opinion shall be considered as being a statement, representation, warrant or argument in favour or against the truthfulness, reliability or completeness of any facts or statements and related circumstances that Raízen may have disclosed to Sustainalytics for the purpose of this Second-Party Opinion.

¹ 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.

² The Green Bond Principles 2021 are administered by the International Capital Market Association and are available at: <https://www.icmagroup.org/sustainable-finance/the-principles-guidelines-and-handbooks/>.

³ 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/>.

⁴ The Climate Transition Finance Handbook is administered by the International Capital Market Association and is available at: <https://www.icmagroup.org/assets/documents/Regulatory/Green-Bonds/Climate-Transition-Finance-Handbook-December-2020-091220.pdf>.

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Introduction

Raízen Energia SA (“Raízen” or the “Company”) is a joint venture formed in 2011 from the merger of assets related to sugar, fuel and ethanol derived from Cosan and Royal Dutch Shell in Brazil. The Company uses sugarcane to produce sugar, ethanol and electricity from waste bagasse, and owns and operates fuel distribution facilities. In 2021, Raízen acquired Biosev to expand its renewable energy portfolio. As of 2021, the Company had a cogeneration installed capacity to 1.5 GW. Raízen is among the largest energy companies in Brazil by revenue and primarily serves customers in Brazil with a team of more than 40,000 employees, operating across 35 bioenergy parks.

Raízen has developed the Raízen Green Financing Framework (the “Framework”) under which it intends to issue green bonds and loans. Raízen engaged Sustainalytics to review the Framework, dated August 2022, and provide a Second-Party Opinion on the Framework’s alignment with the Green Bond Principles 2021 and Green Loan Principles 2021 (the “Principles”), and the recommendations of the Climate Transition Finance (CTF) Handbook 2020. The Framework has been published in a separate document.⁵ The Framework updates and replaces Raízen’s 2022 Green Financing Framework released in April 2022, for which Sustainalytics provided a previous second-party opinion.

Under the use of proceeds instruments, Raízen intends to use the proceeds to finance and refinance, in whole or in part, existing and future expected to support the Company’s initiatives toward expanding its renewable energy portfolio and improving the energy efficiency of its facilities. The Framework defines eligibility criteria in two green categories:

1. Renewable energy
2. Energy Efficiency

⁵ The Raízen Green Financing Framework is available on Raízen Energia SA’s website at: <https://ri.raizen.com.br/en/disclosures-and-documents/green-bond/>

Sustainalytics' Opinion

Section 1: Sustainalytics' Opinion on the Alignment of the Raízen Green Financing Framework with Relevant Market Standards

Alignment with Use of Proceeds Principles

Sustainalytics is of the opinion that the Raízen Green Financing Framework is credible, impactful and aligns with the Green Bond Principles 2021 and Green Loan Principles 2021. For detailed information, please refer to Appendix 1: Green Bond/Green Bond Programme External Review Form. Sustainalytics highlights the following elements of Raízen's Green Financing Framework:



Use of Proceeds

Overall Assessment of Use of Proceeds

Raízen intends to use the proceeds of the green bonds to finance renewable energy and energy efficiency projects and assets. Refinancing of eligible operating expenditures will be limited to those no older than three years from the issuance of the green bond. When allocating proceeds from issuances connected to this Framework to purchase and/or produce feedstock, these will be covered by internationally recognized standards such as Bonsucro. In addition, the Framework includes an exclusionary criterion for projects or assets that are powered by fossil fuels or that are associated with environmental negative resource extraction including deforestation. Sustainalytics considers these exclusions to strengthen the Framework.

Use of Proceeds	Activity	Description and Sustainalytics' Assessment
Renewable Energy	Bioenergy and renewable energy	<ul style="list-style-type: none"> - Capital expenditures related to the development, construction, remodeling, operation, and maintenance of renewable energy projects, such as: (i) biofuel production facilities including second-generations ethanol plants that use sugarcane straw and bagasse as feedstock, (ii) cogeneration units that use bagasse and other forestry and agricultural residues as feedstock where financing will be limited to facilities with an emission intensity of less than 100 gCO₂e/kWh, (iii) plants for the biodigestion of industrial sugarcane residues used for power generation or production of biomethane through biogas with feedstock limited to residues sourced from the sugarcane facilities certified under Bonsucro, and (iv) solar power generation units. Raízen has confirmed to Sustainalytics that financing toward concentrated solar plants will be limited to projects that generate at least 85% electricity from solar energy sources. - The Company may also finance labour costs associated with eligible facilities described above and the purchase of equipment that are powered by renewables, such as biomass boilers and turbines for industrial operation, as well as equipment that will be used in biofuel production, cogeneration units and solar power plants. - Operating expenditures related to renewable energy projects, such as: (i) sugarcane plantation and purchase of sugarcane feedstock certified by Bonsucro, and (ii) the purchase of inputs used in biogas production. - Sustainalytics considers investments under this category to be in line with market practice.
Energy Efficiency	Improvement and purchase of energy efficient equipment	<ul style="list-style-type: none"> - Expenditures related to the improvement of energy efficiency at sugarcane ethanol biofuel plants, co-generation units, biogas facilities and/or solar plants, such as through the purchase of energy efficient equipment.

		<ul style="list-style-type: none"> - Equipment purchased will be powered by renewable energy and may include those related to the industrialization process such as boilers, turbines and other new equipment that increase the steam generation capacity per ton of dry biomass processed. Raízen has confirmed that the industrial operation is 100% renewable, and uses biomass and steam for energy generation. During the off-season (when the mill is not operating) it uses energy from the National Interconnected System (SIN). - This is aligned with market practice.
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Project Evaluation and Selection

- Projects will be selected and evaluated by Raízen’s senior management including CFO and CSO on an annual basis. Raízen will evaluate proposed projects according to the eligibility criteria outlined in the Framework.
- All projects will undergo an environmental and social risk assessment to ensure their alignment with Raízen’s Corporate Governance and Regulatory Policies, Sustainability and Compliance Policies, as well as Health, Safety and Environmental Policy. Sustainalytics considers these environmental and social risk management systems to be adequate and aligned with market expectation. For additional detail see Section 2.
- The senior management provides the final approval after Raízen’s Treasury verifies eligibility. The Company will then detail the decision made and issue an impact report by the end of the year.
- Based on project oversight by the senior management on project selection and risk management system, Sustainalytics considers this process to be in line with market practice.



Management of Proceeds

- Raízen intends to allocate proceeds to an eligible portfolio (the “Eligible Green Portfolio”). The Company intends to maintain a level of allocation that matches or exceeds the balance of net proceeds within 36 months after issuance.
- Raízen’s senior management will be responsible for monitoring the Eligible Green Portfolio and will exclude green assets or capital expenditures that cease to comply with the eligibility criteria or that may have been disposed of, replacing them as soon as reasonably practicable.
- Pending allocation, unallocated proceeds will be held in cash, cash equivalents or money market funds in Raízen’s treasury liquidity portfolio.
- Based on the involvement of senior management and disclosure of temporary use of proceeds, Sustainalytics considers this process to be in line with market practice.



Reporting

- Raízen intends to report on the allocation of proceeds annually as part of, or concurrently, to its sustainability report to be published on its website. Allocation reporting will include the amount of proceeds allocated, share of financing versus refinancing, breakdown of the debt instruments by nature of what is being financed, the geographical distribution of assets or projects, and the balance of unallocated proceeds.
- In addition, Raízen is committed to reporting on relevant impact metrics, where feasible, which may include emissions avoided (tCO₂ against fossil fuel baseline), biogas generated (megajoules/year), bioenergy generated (megawatts/year), solar power generated (megawatts/year).
- Based on the commitment to both allocation and impact reporting, Sustainalytics considers this process to be in line with market practice.

Alignment against the Climate Transition Finance Handbook 2020

Sustainalytics has assessed the Raízen’s alignment with the recommendations of the Climate Transition Finance (CTF) Handbook and considers the Company’s transition strategy to be partially aligned. Sustainalytics highlights the following key elements of the assessment:

Key Elements	ICMA Recommendation	Sustainalytics' Assessment	
Issuer’s climate transition strategy and governance	<ul style="list-style-type: none"> - Transition strategy to address climate-related risks and contribute to alignment with the goals of the Paris Agreement - Relevant interim targets on the trajectory towards long-term goal - Governance of transition strategy 	<ul style="list-style-type: none"> - Raízen has developed a Strategic Sustainability Plan to address key environmental and social issues associated with its business operations including the energy transition. As part of this plan, Raízen has formulated a commitment to addressing climate change and the transition to renewable energy. In this regard, the Company has stated to Sustainalytics that it intends to prioritize capital allocation to its renewable energy portfolio. Furthermore, Raízen established a roadmap for 2030 that includes commitments to promote decarbonization by accelerating the renewable energy portfolio and reducing the share of fossil fuel in its overall portfolio.⁶ In line with this roadmap, Raízen increased its aim for reducing the carbon footprint of ethanol and sugar in its operations from 10% to 20% by 2030 from a 2018-19 baseline.⁷ The Company established a target to reduce scope 3 emissions by 10% per MJ of energy sold by 2030 from a 2018-19 baseline. The scope 3 reduction target focuses on reducing emissions from the "use of sold products" category, which accounts for almost 95% of Raízen's total scope 3 emissions. In addition to these emission reduction goals, Raízen will increase renewable energy production by 80% by 2030, thereby reaching at least 80% of its adjusted EBITDA⁸ from renewable businesses by limiting their involvement in fossil fuels. The sustainability plan does not, however, include the interim targets to shift away from its involvement in fossil fuel distribution, which accounts for about 20% of the Company’s revenues. - The Corporate Social Responsibility Committee (composed of Raízen's CEO, Vice Presidents, shareholders and Chief Sustainability Officer) evaluates and directs the Company's actions on sustainability issues, including those related to climate change. The committee is responsible for reporting and monitoring the priority themes of the Strategic Sustainability Plan, the approval and monitoring of the goal defined by Raízen for reducing GHG emissions, and advancing the Company's strategy for carbon pricing programs, such as Renovabio.⁹ - In addition, the Audit Committee (which reports to the board and is composed by senior leadership including the CEO) is responsible for risk management for the entire company, preparing and monitoring the action plans developed for each mapped risk. The Sustainability Manager provides technical support to 	Partially Aligned

⁶ Raízen, "Public commitments", at: <https://www.raizen.com.br/en/esg-agenda/public-commitments/public-commitments>

⁷ Ibid.

⁸ EBITDA refers earnings before interest, taxes, depreciation, and amortization, and is a measure of a company's overall financial performance. Investopedia, "EBITDA: Earnings Before Interest, Taxes, Depreciation, and Amortization", at: <https://www.investopedia.com/terms/e/ebitda.asp>

⁹ CDP, "Raízen S.A. - Climate Change 2021", at: https://www.cdp.net/en/formatted_responses/responses?campaign_id=74241094&discloser_id=892698&locale=en&organization_name=Raizen+S.A.&organization_number=35374&program=Investor&project_year=2021&redirect=https%3A%2F%2Fcdp.credit360.com%2Fsurveys%2F2021%2Fdbbr64mv%2F142897&survey_id=73557641

		<p>the Audit Committee on matters related to climate and is responsible for mapping and managing risks and opportunities related to climate change that must be present in the risk matrix. The risks and opportunities mapped by the Sustainability Manager are also assessed, validated and managed by the Chief Sustainability Officer.</p> <ul style="list-style-type: none"> - Additionally, the Company created the Strategy & Sustainability Executive Vice Presidency, which combines strategy, new businesses, M&A and sustainability areas and incorporates ESG aspects into the strategic discussions and decision-making process, including the capital allocation. For a detailed assessment of Raízen’s sustainability strategy, refer to Section 2. 	
Business model environmental materiality	<ul style="list-style-type: none"> - Transition trajectory should be relevant to the environmentally material parts of the issuer’s business model 	<ul style="list-style-type: none"> - As part of its transition trajectory, Raízen has invested in increasing the share of renewable energy and biofuels in its portfolio. This includes solar energy and a biogas plant for the production of electricity, as well as pellet production from bagasse.¹⁰ - Raízen has revised its climate strategy and capital allocation methodology to include a carbon intensity contribution when evaluating every M&A project to reduce the share of fossil fuel in its overall portfolio. Projects that reduce the overall carbon intensity of the Company’s portfolio will receive a higher ranking in the assessment. Additionally, the Company has established exclusion areas that include coal-based businesses and refinery operations. 	Aligned
Climate transition strategy to be science based, including targets and pathways	<ul style="list-style-type: none"> - Transition strategy should reference science-based targets and transition pathways 	<ul style="list-style-type: none"> - While Raízen overall intends to align with the Paris Agreement by seeking to increase the generation of renewable energy and encourage a low-carbon economy,¹¹ Raízen’s sustainability strategy does not reference science-based targets and transition pathways. - Raízen has communicated to Sustainalytics that it is currently in the process of updating its climate change strategy with the intention to align with science-based targets. 	Not Aligned
Implementation transparency	<ul style="list-style-type: none"> - Disclosure of capex and opex plans - Climate-related outcomes and intended impacts 	<ul style="list-style-type: none"> - As part of Raízen Day, a public event dedicated to investors, the Company has publicly communicated its climate strategy and capex plans, which prioritize investments in second-generation biofuels and biogas plants integration into existing bioenergy parks.¹² - Raízen has communicated that it intends to provide ongoing annual public reporting through standard reporting channels related to its transition plans and expected outcomes. 	Aligned

¹⁰ Ibid.

¹¹ Raízen, “Annual Sustainability Report 2021 | 2022”, at: https://www.raizen.com.br/relatorioanual/2022/en/pdf/RS2021_RAIZEN_EN.pdf

¹² Raízen, “Raízen, Day 2022”, at: <https://api.mziq.com/mzfilemanager/v2/d/c016735f-1711-48ce-919f-a8c701b83c19/0e29ed99-c0bb-1bd2-5bbe-217caf23ab34?origin=1>

Section 2: Assessment of Raízen's Sustainability Strategy

Credibility of Climate Transition Strategy

Raízen's Strategic Sustainability Plan (SSP) developed through stakeholder consultation and comprehensive materiality analysis in 2020 forms the key framework for Raízen's sustainability strategy.¹³ Raízen has identified key material topics, including but not limited to: Climate change and the energy transition; Protecting health, safety and the environment; Governance, ethics and compliance; Innovation, development, and the circular economy; Community engagement; Human rights, diversity and inclusion; Economic and financial performance and business expansion.¹⁴ The SSP aims to define short- and medium-term action plans for each indicator.¹⁵ In addition to the SSP, the Company implemented the Climate Change Strategy in 2022, which contains new commitments for 2030 to promote decarbonization by accelerating the renewable energy portfolio and reducing its overall fossil fuel portfolio share.¹⁶

Emission-Reduction Targets

As part of Raízen's commitment to energy and climate transition, Raízen intends to reduce its carbon footprint by increasing efficiency and innovation throughout its processes and delivering bioproducts with lower emissions. More specifically, Raízen increased its aim for reducing the carbon footprint of ethanol and sugar in its operations from 10% to 20% per megajoule of ethanol or per kilo of sugar by 2030 compared to the 2018-19 harvest. Additionally, the Company established a target to reduce scope 3 emissions by 10% per MJ of energy sold by 2030 compared to the 2018-19 harvest. The scope 3 reduction target focuses on reducing emissions from the "use of sold products" category, which accounts for almost 95% of Raízen's total scope 3 emissions. Raízen is also in the process of setting science-based targets to reduce its GHG emissions intensity.¹⁷

Decarbonization Pathway and Implementation Plan

Raízen's sustainability strategy to advance the energy transition is outlined in the Company's SSP. As part of this strategy, Raízen focuses on areas with material impact, including increasing the production of low-carbon biofuels, the use of by-products from sugarcane processing as natural fertilizers, and the use of filter cake and vinasse as inputs for the biogas plant to generate electricity or biomethane and as input to produce second-generation ethanol and meet the energy demand of its operations.

To reduce emissions from ethanol, Raízen intends to continue investing in research and development, to increase productivity and energy efficiency. Steps taken so far include the substitution of synthetic fertilizers with sugarcane by-products as natural fertilizers, amendments to soil management techniques to implement sustainable agricultural techniques and reduce the use of fossil fuels in agricultural operations. Raízen has also become a member of the CDP supply chain group and the Company works with its suppliers to manage emissions and climate change risks. Moving forward, Raízen also intends to diversify its renewable portfolio by allocating 85% of capex for renewables and increase the adjusted EBITDA from renewable business by 80% by 2030-31.¹⁸

Based on the above, Sustainalytics is of the opinion that the Raízen Green Financing Framework is aligned with the Company's overall sustainability strategy and initiatives. Sustainalytics encourages the Company to establish a sustainability strategy that includes the entirety of its product portfolio.

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 recognized by the GBP to have positive environmental impact. However, Sustainalytics is aware that such eligible projects could also bear environmental and social risks related to the overall environmental and social impact of products and services, community relations, labour rights, human rights within its supply chain, water use, waste and procurement. Sustainalytics is of the opinion that Raízen is able to manage or mitigate potential risks through implementation of the following systems:

¹³ Raízen, "Annual Sustainability Report 2020 | 2021", (2021), at: <https://www.Raízen.com.br/relatorioanual/2021/pdf/Raízen-rs2021-en.pdf>

¹⁴ Ibid.

¹⁵ Ibid.

¹⁶ Raízen, "Raízen, Day 2022", at: <https://api.mziq.com/mzfilemanager/v2/d/c016735f-1711-48ce-919f-a8c701b83c19/0e29ed99-c0bb-1bd2-5bbe-217caf23ab34?origin=1>

¹⁷ CDP, "Raízen S.A. - Climate Change 2021", at: https://www.cdp.net/en/formatted_responses/responses?campaign_id=74241094&discloser_id=892698&locale=en&organization_name=Raízen+S.A.&organization_number=35374&program=Investor&project_year=2021&redirect=https%3A%2F%2Fcdp.credit360.com%2Fsurveys%2F2021%2Fdbbr64mv%2F142897&survey_id=73557641

¹⁸ Raízen, "Raízen, Day 2022", at: <https://api.mziq.com/mzfilemanager/v2/d/c016735f-1711-48ce-919f-a8c701b83c19/0e29ed99-c0bb-1bd2-5bbe-217caf23ab34?origin=1>

- Raízen has a Sustainability Policy that applies to all businesses and employees who work on behalf of the Company in all its business units. This policy intends to transparently communicate to stakeholders the Company's ambitions and actions in pursuit of sustainable development. In addition, to expand the scope and facilitate applicability of sustainability in Raízen's operations, the policy covers topics including energy efficiency, climate change, water management, community relations, human rights, diversity, land use and sustainable sugarcane procurement.¹⁹
- Additionally, Raízen's Health, Safety and Environment (HSE) Policy addresses environmental risks by encouraging business units to operate in an ethical, safe and environmentally sustainable way. The guidelines on the HSE Policy are shared among all team members through an awareness-raising agenda coordinated by the leaders of the Company's Executive Committee.
- Raízen has multiple institutionalized policies and procedures to ensure human rights throughout its production chain and operations,²⁰ including its Sustainability Policy, the Raízen Code of Conduct, the HSE Policy, among others. The Company's Ethics Channel conducts regular human rights reviews followed by employee training on human rights policies and procedures.
- 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 is based on the use of water from the sugarcane itself. The water which evaporates after sugarcane crushing is condensed for use in the industry on two fronts: reducing water consumption per tonne of sugarcane crushed and cold-water use in boilers by reusing hot water. Raízen has reduced water withdrawals by approximately 22% since the start of the programme.
- Regarding waste management risks, the Company uses an Integrated Operations Management System (SIGO), which encompasses the managing of effluents, waste, air emissions, permits along with an environmental management plan and a solid waste management plan. The Company continues to invest in effluent treatment plants and wastewater treatment plants, seeking to improve the quality of the effluents authorized for discharge. Furthermore, to reduce effluent generation, the Company also invests in technology projects for water reuse, monitoring and mapping of processes, closing of circuits and cooling towers for water reuse.
- 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 helps to ensure that procurement is carried out in accordance with market practices, meeting internal procurement requirements based on the socio-economic development of all stakeholders.

Based on these policies, Sustainalytics is of the opinion that Raízen has adequate measures in place and is well positioned to manage or mitigate environmental and social risks commonly associated with the eligible categories.

¹⁹ Raízen, "Sustainability Policy", (2020), at: <https://s3-sa-east-1.amazonaws.com/Raízen-prod/items-files/item-391-Raízen-sustainabilitypolicy.pdf>

²⁰ Raízen, "Third Party Policies and Procedures", (2021), at: <https://www.raizen.com.br/en/about-raizen/third-party-policies-and-procedures>

Section 3: Impact of the UoPs Selected

The role of renewable energy and energy efficiency in Brazil's transition to a low-carbon economy

Renewable sources account for 45.3% of the energy mix in Brazil.²¹ In 2020, Brazil ranked 14th worldwide in terms of installed solar power.²² The total installed solar power in Brazil generated approximately 2.48% of the country's electricity demand in 2021, as against 0.7% in 2018.²³ The Brazilian Ministry of Mines and Energy (MME) also reported a 67% year-on-year increase for solar power generation in 2021.²⁴ In the last decade, investments in solar power have increased and solar generated electricity is increasingly being viewed as the most competitive form of renewable energy in Brazil with a low price.²⁵ Moreover, Brazil has set the ambition of 45% of its energy needs being generated from renewable energy by 2050. In line with these commitments, Brazil's MME and the nation's state-run Energy Research Office (EPE in Portuguese) introduced a National Energy Plan (PNE) in 2020 to carry Brazil through to 2050.²⁶

In the case of biofuels, the share of renewables in the Brazilian transport sector's energy mix was over 23%, which is nearly seven times the global average of 3.3%.²⁷ Since the 1970s, sugarcane has grown and diversified as a source of energy in Brazil, encompassing ethanol, electricity and biogas.²⁸ 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%.²⁹ Brazil has had blending mandates for bioethanol and biodiesel under various laws enacted since at least the early 1990s.³⁰ As of 2018, Brazil had increased its mandatory ethanol blend to 27% for all gasoline and 73% of all cars in the country could operate on ethanol fuel alone because of the widely successful adoption of flex-fuel vehicles.^{31,32} 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.³³

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 emissions in 2030 by 43% compared with 2005. In addition, Brazil intends to adopt further measures that are consistent with the 2°C climate scenario increasing its share of renewables in the energy mix to 45%, in which biofuels would increase to approximately 18% by 2030.³⁴ Brazil surpassed its target of increasing the share of biofuels in the energy mix in 2018, reaching 18.9% of renewables in the energy mix (17.4% for sugarcane products and 1.5% for biodiesel).³⁵ Based on the above, Sustainalytics expects Raízen's investments in renewable energy and biofuels to contribute to the transition of the Brazilian economy into a low-carbon one.

²¹ 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>

²² ANEEL, "Power generation capacity in Brazil exceeds 180 GW", (2021), at: https://www.aneel.gov.br/sala-de-imprensa-exibicao/-/asset_publisher/XGPXSqdMFHrE/content/capacidade-de-geracao-de-energia-no-brasil-supera-os-180-gw/656877?inheritRedirect=false&redirect=https%3A%2F%2Fwww.aneel.gov.br%2Fsala-de-imprensa-exibicao%3Fp_p_id%3D101_INSTANCE_XGPXSqdMFHrE%26p_p_lifecycle%3D0%26p_p_state%3Dnormal%26p_p_mode%3Dview%26p_p_col_id%3Dcolumn-2%26p_p_col_count%3D3

²³ Ibid.

²⁴ Renewables Now, "Solar power to grow 67% by end-2021 in Brazil", (2021), at: <https://renewablesnow.com/news/solar-power-to-grow-67-by-end-2021-in-brazil-759279/>

²⁵ MercoPress, "Brazil pledges a target of 45% renewable energy by 2050", (2020), at: <https://en.mercopress.com/2020/12/26/brazil-pledges-a-target-of-45-renewable-energy-by-2050>

²⁶ Ibid.

²⁷ 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>

²⁸ Global Issues, "Green Gas: Energy as a By-Product of Sugarcane in Brazil", (2021), at: <https://www.globalissues.org/news/2021/12/20/29647>

²⁹ Bajay, S., "National Energy Policy: Brazil", Encyclopaedia of Energy, (2004), at: <https://www.sciencedirect.com/topics/engineering/proalcool-program>

³⁰ Ibid.

³¹ Rapid Transition Alliance, "The Rise of Brazil's Sugarcane Cars" (2018), at: <https://www.rapidtransition.org/stories/the-rise-of-brazils-sugarcane-cars/>

³² 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>

³³ 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

³⁴ 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>

³⁵ 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>

Alignment with/contribution to SDGs

The Sustainable Development Goals 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 Sustainability-Linked Finance 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

Conclusion

Raízen has developed the Raízen Green Financing Framework under which it may issue green bonds and loans, and use the proceeds to finance or refinance, in whole or in part, existing or future projects related to renewable energy and energy efficiency, 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 positive environmental impact.

The Raízen Green Financing Framework outlines a process for tracking, allocating and managing proceeds, and makes commitments for Raízen to report on the allocation and impact of the use of proceeds. Furthermore, Sustainalytics believes that the Raízen Green Financing Framework is aligned with the overall sustainability strategy of the Company and is expected to contribute to the advancement of the UN Sustainable Development Goals 7, 9 and 12. Additionally, Sustainalytics is of the opinion that Raízen has adequate measures to identify, manage and mitigate environmental and social risks commonly associated with the eligible projects funded by the proceeds.

Based on the above, Sustainalytics is of the opinion that the Raízen Green Financing Framework aligns with the Green Bond Principles 2021 and Green Loan Principles 2021. Sustainalytics has also assessed Raízen’s alignment with the recommendations of the Climate Transition Finance Handbook and considers the Company’s transition strategy to be partially aligned.

Appendix 1 Green Bond / Green Bond Programme - External Review Form

Section 1. Basic Information

Issuer name:	Raízen Energia SA
Green Bond ISIN or Issuer Green Bond Framework Name, if applicable:	Raízen Green Financing Framework
Review provider's name:	Sustainalytics
Completion date of this form:	August 15, 2022

Section 2. Review overview

SCOPE OF REVIEW

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

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

- | | |
|------------------------------------------------------------|----------------------------------------------------------------------------------|
| <input checked="" type="checkbox"/> Use of Proceeds | <input checked="" type="checkbox"/> Process for Project Evaluation and Selection |
| <input checked="" type="checkbox"/> Management of Proceeds | <input checked="" type="checkbox"/> Reporting |

ROLE(S) OF REVIEW PROVIDER

- | | |
|---------------------------------------------------------------------------------|----------------------------------------|
| <input checked="" type="checkbox"/> Consultancy (incl. 2 nd opinion) | <input type="checkbox"/> Certification |
| <input type="checkbox"/> Verification | <input type="checkbox"/> Rating |
| <input type="checkbox"/> 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):

Raízen intends to use the proceeds of the green bonds to finance renewable energy and energy efficiency projects and assets. Refinancing of eligible operating expenditures will be limited to those no older than three years from the issuance of the green bond. Raízen commits to procure feedstock from sustainable sources that are covered by internationally recognized standards such as Bonsucro. In addition, the Framework includes an exclusionary criterion for projects or assets that are powered by fossil fuels or that are associated with environmental negative resource extraction including deforestation. Sustainalytics considers these exclusions to strengthen the Framework.

Use of proceeds categories as per GBP:

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

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

2. PROCESS FOR PROJECT EVALUATION AND SELECTION

Overall comment on section (if applicable):

Projects will be selected and evaluated by Raízen's senior management including CFO and CSO on an annual basis. Raízen will evaluate proposed projects according to the eligibility criteria outlined in the Framework. All projects will undergo an environmental and social risk assessment to ensure their alignment with Raízen's Corporate Governance and Regulatory Policies, Sustainability and Compliance Policies, as well as Health, Safety and Environmental Policy. Sustainalytics considers these environmental and social risk management systems to be adequate and aligned with market expectation. For additional detail see Section 2. The senior management provides the final approval after Raízen's Treasury verifies eligibility. The Company will then detail the decision made and issue an impact report by the end of the year. Based on project oversight by the senior management on project selection and risk management system, Sustainalytics considers this process to be in line with market practice.

Evaluation and selection

- | | |
|--------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|
| <input checked="" type="checkbox"/> Credentials on the issuer's environmental sustainability objectives | <input checked="" type="checkbox"/> Documented process to determine that projects fit within defined categories |
| <input checked="" type="checkbox"/> Defined and transparent criteria for projects eligible for Green Bond proceeds | <input checked="" type="checkbox"/> Documented process to identify and manage potential ESG risks associated with the project |
| <input checked="" type="checkbox"/> Summary criteria for project evaluation and selection publicly available | <input type="checkbox"/> Other (<i>please specify</i>): |

Information on Responsibilities and Accountability

- | | |
|----------------------------------------------------------------------------------------------------------------|----------------------------------------------|
| <input checked="" type="checkbox"/> Evaluation / Selection criteria subject to external advice or verification | <input type="checkbox"/> In-house assessment |
| <input type="checkbox"/> Other (<i>please specify</i>): | |

3. MANAGEMENT OF PROCEEDS

Overall comment on section (*if applicable*):

Raízen intends to allocate proceeds to an eligible portfolio (the "Eligible Green Portfolio"). The Company intends to maintain a level of allocation that matches or exceeds the balance of net proceeds within 36 months after issuance. Raízen's senior management will be responsible for monitoring the Eligible Green Portfolio and will exclude green assets or capital expenditures that cease to comply with the eligibility criteria or that may have been disposed of, replacing them as soon as reasonably practicable. Pending allocation, unallocated proceeds will be held in cash, cash equivalents or money market funds in Raízen's treasury liquidity portfolio. Based on the involvement of senior management and disclosure of temporary use of proceeds, Sustainalytics considers this process to be in line with market practice.

Tracking of proceeds:

- | |
|-------------------------------------------------------------------------------------------------------------------------------|
| <input checked="" type="checkbox"/> Green Bond proceeds segregated or tracked by the issuer in an appropriate manner |
| <input checked="" type="checkbox"/> Disclosure of intended types of temporary investment instruments for unallocated proceeds |
| <input type="checkbox"/> Other (<i>please specify</i>): |

Additional disclosure:

- | | |
|-----------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| <input type="checkbox"/> Allocations to future investments only | <input checked="" type="checkbox"/> Allocations to both existing and future investments |
| <input type="checkbox"/> Allocation to individual disbursements | <input checked="" type="checkbox"/> Allocation to a portfolio of disbursements |

- Disclosure of portfolio balance of unallocated proceeds
- Other (*please specify*):

4. REPORTING

Overall comment on section (if applicable):

Raízen intends to report on the allocation of proceeds annually as part of, or concurrently, to its sustainability report to be published on its website. Allocation reporting will include the amount of proceeds allocated, share of financing versus refinancing, breakdown of the debt instruments by nature of what is being financed, the geographical distribution of assets or projects, and the balance of unallocated proceeds. In addition, Raízen is committed to reporting on relevant impact metrics, where feasible, which may include emissions avoided (tCO2 against fossil fuel baseline), biogas generated (megajoules/year), bioenergy generated (megawatts/year), solar power generated (megawatts/year). Based on the commitment to both allocation and impact reporting, Sustainalytics considers this process to be in line with market practice.

Use of proceeds reporting:

- Project-by-project
- On a project portfolio basis
- Linkage to individual bond(s)
- Other (*please specify*):

Information reported:

- Allocated amounts
- Green Bond financed share of total investment
- Other (*please specify*): the amount of proceeds allocated, share of financing versus refinancing, breakdown of the debt instruments by nature of what is being financed, the geographical distribution of assets or projects, and the balance of unallocated proceeds

Frequency:

- Annual
- Semi-annual
- Other (*please specify*):

Impact reporting:

- Project-by-project
- On a project portfolio basis
- Linkage to individual bond(s)
- Other (*please specify*):

Information reported (expected or ex-post):

- GHG Emissions / Savings
- Energy Savings

- 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.

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In case of discrepancies between the English language and translated versions, the English language version shall prevail.

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For more information, visit www.sustainalytics.com

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