



SICREDI

Green Bond Second Opinion

November 19, 2021

Sicredi is a cooperative financial institution in Brazil serving 5.3 million members across 26 states. Sicredi is the second largest agribusiness credit grantor in the country, a large portion of their operations serve rural communities with little access to financial services. Over 98% of their clients are individuals and small and medium-sized businesses. Since 2019, Sicredi has been active in the financing of solar PV systems in Brazil with IDB's group support; solar power represents 2.8% of Sicredi's portfolio, and it is expected to increase.

The green bond framework lists eligible projects within the Renewable Energy (approx. 95% of the net proceeds) and Energy Efficiency (approx. 5% of the net proceeds) categories. An amount equal to the net proceeds will only be used to finance new eligible projects: the renewable energy category focuses on solar energy and the energy efficiency category includes efficient lighting and efficient refrigeration/cooling projects, which will be a new credit line product for Sicredi. Sicredi specifically screens to avoid solar PV projects in deforested areas, and uses exclusion lists that eliminate upstream fossil fuel related projects. Nevertheless, there remain concerns if areas are not correctly tagged as deforested areas as well as for other potential controversies as there is no additional systematic approach to mitigate mistakes during site assessments and no further systematic environmental considerations on the clients' activities or construction impacts of the projects. In addition, while the framework limits financing to MSMEs, solar projects could also be off grid directly supporting clients' activities. Sicredi does not exclude any of its clients from financing under this framework incl., e.g., industrial meat producers or activities that could be fossil fuel intensive.

Sicredi has demonstrated clear intent towards promoting sustainability and implementing climate-oriented strategies, but it could improve its governance procedures. Although Sicredi has policies and strategies that focus on providing cross-institutional guidelines on sustainability, it has yet to set concrete quantitative targets for its own environmental impact. The selection process does not include supply chain considerations or life cycle assessments and it is unclear how environmental expertise will be involved in the selection process or if it has veto power. The issuer has noted that it screens for climate risks according to TCFD in its internal project surveys. Processes for regular and transparent reporting about green bond project achievements to investors and the public are in place.

Based on the overall assessment of the project types that will be financed by the green bond, governance and transparency considerations, Sicredi green bond framework receives a **CICERO Dark Green** shading and a governance score of **Good**. The framework would benefit from adding explicit requirements for involvement of environmental expertise in the selection process, and from adding life cycle assessments and more rigorous environmental screening to project selection processes.

SHADES OF GREEN

Based on our review, we rate the Sicredi's green bond framework **CICERO Dark Green**.

Included in the overall shading is an assessment of the governance structure of the green bond framework. CICERO Shades of Green finds the governance procedures in Sicredi's framework to be **Good**.



GREEN BOND PRINCIPLES

Based on this review, this Framework is found to be in alignment with the principles.





Contents

1	Terms and methodology	3
	Expressing concerns with 'Shades of Green'	3
2	Brief description of Sicredi's green bond framework and related policies	4
	Environmental Strategies and Policies	4
	Use of proceeds	5
	Selection	5
	Management of proceeds	5
	Reporting	5
3	Assessment of Sicredi's green bond framework and policies	7
	Overall shading	7
	Eligible projects under the Sicredi's green bond framework	7
	Background	8
	Governance Assessment	9
	Strengths	10
	Weaknesses	10
	Pitfalls	10
	Appendix 1: Referenced Documents List	12
	Appendix 2: About CICERO Shades of Green	13



1 Terms and methodology

This note provides CICERO Shades of Green's (CICERO Green) second opinion of the client's framework dated November 2021. This second opinion remains relevant to all green bonds and/or loans issued under this framework for the duration of three years from publication of this second opinion, as long as the framework remains unchanged. Any amendments or updates to the framework require a revised second opinion. CICERO Green encourages the client to make this second opinion publicly available. If any part of the second opinion is quoted, the full report must be made available.

The second opinion is based on a review of the framework and documentation of the client's policies and processes, as well as information gathered during meetings, teleconferences and email correspondence.

Expressing concerns with 'Shades of Green'

CICERO Green second opinions are graded dark green, medium green or light green, reflecting a broad, qualitative review of the climate and environmental risks and ambitions. The shading methodology aims to provide transparency to investors that seek to understand and act upon potential exposure to climate risks and impacts. Investments in all shades of green projects are necessary in order to successfully implement the ambition of the Paris agreement. The shades are intended to communicate the following:

CICERO Shades of Green



Dark green is allocated to projects and solutions that correspond to the long-term vision of a low carbon and climate resilient future. Fossil-fueled technologies that lock in long-term emissions do not qualify for financing. Ideally, exposure to transitional and physical climate risk is considered or mitigated.



Medium green is allocated to projects and solutions that represent steps towards the long-term vision, but are not quite there yet. Fossil-fueled technologies that lock in long-term emissions do not qualify for financing. Physical and transition climate risks might be considered.



Light green is allocated to projects and solutions that are climate friendly but do not represent or contribute to the long-term vision. These represent necessary and potentially significant short-term GHG emission reductions, but need to be managed to avoid extension of equipment lifetime that can lock-in fossil fuel elements. Projects may be exposed to the physical and transitional climate risk without appropriate strategies in place to protect them.

Examples



Wind energy projects with a strong governance structure that integrates environmental concerns



Bridging technologies such as plug-in hybrid buses



Efficiency investments for fossil fuel technologies where clean alternatives are not available

Sound governance and transparency processes facilitate delivery of the client's climate and environmental ambitions laid out in the framework. Hence, key governance aspects that can influence the implementation of the green bond are carefully considered and reflected in the overall shading. CICERO Green considers four factors in its review of the client's governance processes: 1) the policies and goals of relevance to the green bond framework; 2) the selection process used to identify and approve eligible projects under the framework, 3) the management of proceeds and 4) the reporting on the projects to investors. Based on these factors, we assign an overall governance grade: Fair, Good or Excellent. Please note this is not a substitute for a full evaluation of the governance of the issuing institution, and does not cover, e.g., corruption.



2 Brief description of Sicredi's green bond framework and related policies

Sicredi is a cooperative financial institution in Brazil serving 5.3 million members, comprising of 108 credit cooperatives. Each credit union is affiliated with one of the five regional cooperative centrals, that are shareholders of SicrediPar, a holding company. They are present in 26 states and a large portion of their operations serve rural communities with little access to financial institutions. Over 98% of their clients are individuals and small and medium-sized businesses, with agribusinesses being the focus in credit operations (second largest agribusiness credit granting financial institution in Brazil).

Since 2019, Sicredi has been active in the financing of solar PV systems in Brazil with IDB's group support; solar power represents 2.8% of Sicredi's portfolio, and it is expected to increase.

Environmental Strategies and Policies

Until 2020 Sicredi's sustainability strategy was guided by its Sustainability and Social Environmental Responsibility Policy. Since, they have expanded their policies to include a Sustainability Policy and a Social and Environmental Risk Management Policy.

The Sustainability Policy considers the triple bottom line of social, environmental, and economic benefits as a cross-institutional guiding principle of their business activities. It reinforces the concepts of cooperativism and Sicredi's commitment to promoting the well-being of the communities they work in. The policy reinforces the adherence to the Global Compact by acknowledging the use of their principles as reference for decision-making and relating with stakeholders, together with the Cooperative Principles established by the ICA, and the UN 2030 Agenda. It also establishes that Sicredi will follow TCDF recommendations to assess the climate risk of their credit portfolio. This is complemented by The Social and Environmental Risk Management Policy that establishes the guidelines for management of risks and prevention of socio-environmental damage.

Sicredi has been reporting following the Global Report Initiative methodology since 2012; SicrediPar's Board of Directors has the responsibility to monitor the preparation of annual Sustainability Reports under these standards. Sicredi's scope 1, 2 and 3, carbon emissions are monitored in the Public Emissions Registry of the Brazilian GHG Protocol program. Nevertheless, Sicredi does not have quantitative targets in place regarding GHG emission reductions. In 2020, Sicredi's total Scope 3 emissions were 12,121 ton CO₂e, approximately two times the total for Scope 1 emissions and more than 3 times the total for Scope 2 emissions, with upstream transportation being the largest contributor, followed by waste production in operations. In 2020, Sicredi started offsetting 100% of its GHG emissions (scopes 1, 2 and 3) with credits from forest conservation programs. Emissions calculated in the 2019 inventory were neutralized through the support to the Jari Pará REDD+ Project, that works avoiding deforestation and minimizing social and environmental impacts in the Amazon. For 2020 emissions, Sicredi chose to support carbon credit projects in all five regions of the country: project Agroco¹, project Buenos Aires², project Reunidas³, project Compostagem⁴, and project Aterro Sanitário Bandeirantes⁵.

¹ <https://www.sustainablecarbon.com/blog/projeto-agroco-cortex-na-amazonia-e-eleito-o-melhor-projeto-socioambiental-do-brasil-e-o-melhor-projeto-redd-da-america-latina/>

² <https://www.sustainablecarbon.com/pinweb/buenos-aires/>

³ <https://www.sustainablecarbon.com/pinweb/reunidas/>

⁴ <https://www.sustainablecarbon.com/pinweb/compostagem/>

⁵ <https://www.amigodoclima.com.br/projetos/projeto/5d517f592a31e2001221798a/>



Use of proceeds

Sicredi includes two project categories in its framework, renewable energy and energy efficiency. Only new projects are eligible for this bond. All proceeds will be used inside Brazil through the network of credit cooperatives affiliated to Banco Cooperativo Sicredi, part of the issuer's holdings, and will be exclusively used to provide new financing to MSMEs, enterprises with annual sales below 6 million Reais.

The renewable energy category will consist of only solar photovoltaic small-scale projects with an average capacity of up to 2MW. The issuer informed that approximately 95% of proceeds will be allocated to this category. The energy efficiency category will include projects in LED lighting and efficient cooling and refrigeration that have reductions of at least 20% of CO₂ emissions.

Sicredi has an internal exclusion list and will also use IDB Invest exclusion list which eliminate projects with certain characteristics, including projects that engage in activities considered not environmentally and socially sustainable. The IDB Invest's list of excluded activities eliminates direct and indirect investments in projects involved in the production, trade or use of coal for power generation by a coal-fired power plant and associated facilities, and upstream oil and gas exploration and development projects.

Selection

The selection process is a key governance factor to consider in CICERO Green's assessment. CICERO Green typically looks at how climate and environmental considerations are considered when evaluating whether projects can qualify for green finance funding. The broader the project categories, the more importance CICERO Green places on the governance process.

Sicredi's Corporate Finance team will perform an in-house assessment of the projects with support from the Environmental and Social Risk area. Projects will first be submitted to a pre-screening based on IFC standards, followed by the standards defined for the use of proceeds. The economic activity will be screened using the exclusion lists, and the environmental impact will be assessed using a proprietary tool developed to assess green investment. The tool considers characteristics of the project to estimate GHG emissions reductions. For solar projects, the technical analysis includes screening for controversial location issues such as deforestation. Sicredi already engages in several internal processes aimed at minimizing environmental and social risks. These include collection of questionnaires on environmental and social risks as well as money laundering before issuing loans.

Management of proceeds

CICERO Green finds the management of proceeds of Sicredi to be in accordance with the Green Bond Principles.

Proceeds from the bonds will be managed by the Treasury and Corporate Finance team at Banco Sicredi using internal tracking systems. The amount of the asset portfolio will be monitored once a year and the allocation of proceeds reviewed annually by an external audit. Loans that become no longer eligible will be replaced within 9 months and changes in the portfolio will be included in annual report. Proceeds not invested will be kept in liquid instruments, such as national treasury bills and federal government bonds, that follow eligibility criteria of the framework. The framework states that said liquid instruments will be required to have low carbon intensity, but the selection methodology to ensure this has not been further specified.

Reporting

Transparency, reporting, and verification of impacts are key to enable investors to follow the implementation of green finance programs. Procedures for reporting and disclosure of green finance investments are also vital to



build confidence that green finance is contributing towards a sustainable and climate-friendly future, both among investors and in society.

Sicredi's Corporate Finance team will report annually on the allocation of the bond proceeds during the life of the bonds. The report will include key indicators aggregated to the project categories, since it is expected that with an average size of \$10,000 per project, the number of projects will be too large to report in a project-by-project basis. These indicators will include number of beneficiaries, amount allocated to each category, amount not allocated, refinancing, outstanding loans by category and enterprise size, number of clients by category and enterprise size, number of outstanding loans by category, number of loans and amount disbursed by category, new installed capacity in kW by category, and GHG emissions reductions by category. The methodology used to determine GHG reductions will be disclosed in the reports. After the disbursement is completed, annual reports issued by Sicredi will be verified by an independent auditor or external reviewer and the resulting reports will be publicly available in the issuer's Investor Relations webpage.



3 Assessment of Sicredi’s green bond framework and policies

The framework and procedures for Sicredi’s green bond investments are assessed and their strengths and weaknesses are discussed in this section. The strengths of an investment framework with respect to environmental impact are areas where it clearly supports low-carbon projects; weaknesses are typically areas that are unclear or too general. Pitfalls are also raised in this section to note areas where Sicredi should be aware of potential macro-level impacts of investment projects.

Overall shading

Based on the project category shadings detailed below, and consideration of environmental ambitions and governance structure reflected in Sicredi’s green bond framework, we rate the framework **CICERO Dark Green**.

Eligible projects under the Sicredi’s green bond framework

At the basic level, the selection of eligible project categories is the primary mechanism to ensure that projects deliver environmental benefits. Through selection of project categories with clear environmental benefits, green bonds aim to provide investors with certainty that their investments deliver environmental returns as well as financial returns. The Green Bonds Principles (GBP) state that the “overall environmental profile” of a project should be assessed and that the selection process should be “well defined”.

Category	Eligible project types	Green Shading and some concerns
Renewable Energy 	<ul style="list-style-type: none"> Solar photovoltaic energy. Through the financing of small-scale photovoltaic solar energy systems (up to 2MW), with an average size of 1,65 m², an average power capacity of 260kWp and an average 25 years of useful life, Sicredi estimates that each solar panel will reduce CO₂ emission in 1,875 tCO₂. 	Dark Green <ul style="list-style-type: none"> ✓ Solar power is key to a low-carbon transition. ✓ The framework allows financing of utility scale and rooftop solar projects, and both on and off grid applications. ✓ Potential concerns regarding deforestation and site selection partially addressed through selection process. ✓ Potential concerns regarding high emitting clients are partially addressed by exclusion lists and size restriction to MSMEs. ✓ All construction projects can have adverse local environmental impacts. ✓ The issuer informed us that life cycle assessments are not part of Sicredi’s standard process.
Energy Efficiency	<ul style="list-style-type: none"> Efficient lighting with LEDs and associated controls. 	Light-Medium Green <ul style="list-style-type: none"> ✓ Sicredi’s energy efficiency credit line has been recently developed and it is expected



Efficient lights that reduce electricity consumption and CO2 emission reductions by at least 20%.



- Efficient cooling and refrigeration. Technologies that generate at least 20% reductions in energy use and CO2 emissions. They have wide applications in refrigerating food, as well as in buildings and industrial processes.

to take approximately only 5% of the green bond proceeds.

- ✓ Potential concerns regarding high emitting clients are partially addressed by exclusion lists and size restriction to MSMEs, but industrial clients or meat producers are not excluded.
- ✓ According to the issuer, projects eligible for this category run on electricity, and therefore not directly related to fossil fuel energy. However, the client could use fossil fuels in its operations and the selection process would not screen this.
- ✓ Focusing on energy efficiency alone lacks broader environmental considerations such as potential global warming impact of refrigerants.
- ✓ Since it is a new credit line, the issuer does not have examples showing how additional risks, such as refrigerants with high global warming potential in refrigeration projects are addressed.
- ✓ The issuer informed us that life cycle assessments are not part of Sicredi's standard process.

.Table 1. Eligible project categories

Background

Brazil has submitted to the UNFCCC its National Determined Contribution committing to a reduction of greenhouse gas emissions of 37% by 2025 and 43% in 2030, compared to 2005 baseline.⁶ To achieve this, among other targets, Brazil has set low-carbon energy goals such as having 45% of renewables in all the energy supply by 2030 and achieving 10% efficiency gains over a pre-defined baseline in the electricity sector by 2030. The National Emissions Registry System (SIRENE) stated in its latest report that in 2016 the country emitted 1.3 Gt of CO₂e, with agriculture and livestock accounting for 33.64% of the total, followed by the energy sector (32.36%).⁷

Brazil is one of the leading countries in the renewable energy landscape in South America, about 83% of total generation came from renewable sources with hydropower accounting for almost 70% of the country's electricity generation. Under the plan Plano Decenal de Expansão de Energia 2027, Brazil is expected to increase its non-hydro renewable energy to 28% of its electricity generation mix by 2027. Despite of solar having the smallest share of electricity generation Brazil has the largest solar market in South America, favored by its good solar radiation levels, and other drivers like net-metering initiatives from the government. Therefore, Brazil's solar energy is expected to increase; over 4.9 gigawatts (GW) of installed solar power was expected to be added in 2021

⁶ <https://www.gov.br/en/government-of-brazil/latest-news/2021/04/brazil-moves-towards-further-reducing-greenhouse-gas-emissions>

⁷ <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7506344/>



according to the Brazilian Association for Solar Photovoltaic Energy's (ABSOLAR) analysis. The government forecasts market growth opportunities for utility-scale projects and distributed solar generation projects.^{8 9}

In addition to Brazil's renewable energy strategies, improving energy efficiency is particularly important to offset the electricity grid's vulnerabilities to climate risks and reduce the burden from increasing demand. According to the Efficient World Scenario of the International Energy Agency, Brazil could limit its increase in energy use to just 22% by 2040 if it addresses the transport and industry sectors. These sectors should be followed by the buildings sector, where cooling could contribute to key savings.¹⁰

As part of the country's strategy to address greenhouse gases emissions reductions targets, Brazil's National Policy on Climate Change (2009), committed to a reduction of 80% of deforestation rate in the Amazon rainforest by 2020 (3,925 km² per year). Nevertheless, deforestation rates trends are getting worse with an estimated deforestation of 11,088 km² in 2020, which increased Brazil's GHG by 9.5%¹¹. This not only hampers the reductions in greenhouse gas emissions but represents a serious threat to the Amazon rainforest which is already vulnerable to climate change. In November 2021, Brazil committed to the COP26 pledge "Glasgow Leaders' Declaration on Forests and Land Use", to work to halt and reverse deforestation by 2030¹². Brazil's agricultural regions are highly dependent on the Amazon water cycle which is at stake. Regarding climate risks, Brazil is already seeing intensified wildfires, changes in patterns of precipitation, temperatures have risen by 0.5°C, and the frequency of extreme weather events is expected to continue to increase.^{13 14}

Governance Assessment

Four aspects are studied when assessing the Sicredi's governance procedures: 1) the policies and goals of relevance to the green bond framework; 2) the selection process used to identify eligible projects under the framework; 3) the management of proceeds; and 4) the reporting on the projects to investors. Based on these aspects, an overall grading is given on governance strength falling into one of three classes: Fair, Good or Excellent. Please note this is not a substitute for a full evaluation of the governance of the issuing institution, and does not cover, e.g., corruption.

Sicredi has a Sustainability Policy and a Social and Environmental Risk Management Policy in place, that establish their strategy and commitment towards sustainability with a variety of guidelines aligned with the TCFD recommendations. Nevertheless, Sicredi lacks ambitious quantitative targets regarding its own climate and environmental action. Regarding project selection, Sicredi has a transparent and standardized selection process and focuses mostly on small-scale solar projects within renewable energy, and in energy efficiency projects at a smaller share. The selection process mitigates potentially controversial projects through screens for deforestation and exclusion lists, but has no mechanisms to eliminate the possibility of financing high emitting clients that fall outside of the exclusion lists such as downstream fossil fuels related activities or industrial meat production. Even though Sicredi has created Sustainability Committees within the scope of the Sustainability Policy, it is unclear how climate and environmental expertise would be involved in the selection of eligible projects or if they would have veto power. Sicredi has regular and transparent reporting processes about green bond project achievements

⁸ <https://www.mordorintelligence.com/industry-reports/brazil-solar-energy-market>

⁹ <https://www.eia.gov/international/analysis/country/BRA/background#electricity>

¹⁰ <https://www.iea.org/articles/e4-country-profile-energy-efficiency-in-brazil>

¹¹ <https://www.reuters.com/world/americas/brazils-greenhouse-gas-emissions-rose-95-2020-with-amazon-deforestation-study-2021-10-28/>

¹² <https://ukcop26.org/glasgow-leaders-declaration-on-forests-and-land-use/>

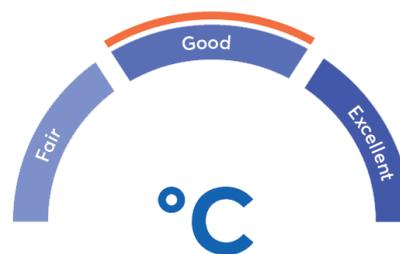
¹³ <https://www.nature.com/articles/s41559-020-01368-x>

¹⁴ <https://www.adaptation-undp.org/explore/latin-america-and-caribbean/brazil>



to investors and the public; reporting on allocation and impact is done annually on a project category, along relevant and key metrics.

The overall assessment of Sicredi's governance structure and processes gives it a rating of **Good**. The governance would benefit from more rigorous targets, incorporating life-cycle analyses that consider construction and supply chain emissions.



Strengths

The project categories proposed by Sicredi represent a clear strength for the framework, since both solar projects and energy efficiency projects are relevant to achieve Brazil's climate goals and for the global low-carbon transition. Sicredi has shared the screening processes for location which ensured that installation of solar PV systems in deforested areas is avoided, and exclusion lists that eliminates direct and indirect investments in projects involved in the production, trade or use of coal for power generation by a coal-fired power plant and associated facilities, and upstream oil and gas exploration and development projects. Moreover, energy efficiency projects have to achieve a reduction of at least 20% in CO₂ emissions, and lightning and refrigerant/cooling projects are electricity based. By committing to exclusively finance MSMEs, financing high emitting clients is mitigated by size. Both project categories have defined clear methodologies to calculate environmental impact in terms of greenhouse gas emission reductions for selection purposes and reporting.

Sicredi informed CICERO that environmental and social risk assessments are performed, and that TCFD recommendations are being applied to internal surveys and analysis to measure climate risk exposure of their credit portfolio. Results of climate risk assessments will be communicated to investors as it is included in Sicredi's credit track reporting.

Sicredi has a standardize and verified annual reporting process that ensures direct communication of allocation of green bond proceeds and impacts to investors. A commitment to substantial impact reporting increases transparency to investors and is a clear strength.

Weaknesses

CICERO finds no material weaknesses in Sicredi's green bond framework.

Pitfalls

Sicredi has yet to set concrete quantitative targets for its own environmental impacts. In addition, it is a pitfall that Sicredi does not conduct life-cycle assessments and supply chain analysis. For example, regarding transparency, Sicredi will report the direct reduction of CO₂e due to the solar PV/increased efficiency which is not reflective of the life cycle approach that looks at emissions more holistically. With regards to the management of proceeds, Sicredi has not provided further information on how it will ensure that unallocated proceeds will only be allocated to low-carbon intensity financial instruments, as stated by the framework.

Sicredi has informed us that it will follow TCFD recommendations for internal surveys. As climate risk assessments are crucial to avoid impacts from climate change, CICERO encourages the issuer continue and increase its efforts to screen for physical climate risks in all regions using, e.g., climate scenarios.

CICERO Green notes that there is a risk that solar panels, LED lightning or cooling systems equipment financed under this framework could be associated with controversial projects and unsustainable activities. Within the criteria defined in the framework for the use of proceeds Sicredi could finance solar or energy efficiency projects



for emission intensive clients, since after the filter of the exclusion lists, Sicredi does not discriminate further between their clients and could, e.g., support industrial meat producers, or fossil fuel intensive activities. In addition, solar projects could also be off grid directly supporting these activities. In order to promote greater stringency and compliance with environmental goals, we encourage Sicredi to further consider supplementing the selection process with additional screening elements to avoid supporting unsustainable activities. Furthermore, even though the selection process screens for projects located in deforested areas, it does not consider the potential impacts of the implementation of the project itself and does not include a systematic verification approach to mitigate the risk of mistakes during site assessment, if the areas are not classified correctly in Sicredi's system for instance. The framework would benefit from a more detailed due diligence process to include construction impacts and broader environmental considerations such as biodiversity loss, for example, where forest covers are removed to make room for projects.

CICERO Green notes that the energy efficiency category is a new product under development and Sicredi does not yet have examples available to provide evidence on what types of projects could be financed under this category. In addition, Sicredi's definition of the category is quite broad. Particularly for refrigeration/cooling projects, a potential issue that has been identified is the fact that the technology can have environmental impacts apart from reduced energy consumption that are not considered in the framework. Industrial refrigeration systems are widely used in high emitting industries like meat production and chemical manufacturers. Moreover, air conditioners rely on refrigerants such as HFCs, that can have a global warming potential many times higher than CO₂. The framework could benefit from specifying requirements for refrigerants or accounting for their impact.

Efficiency improvements may lead to rebound effects. When the cost of an activity is reduced there will be incentives to do more of the same activity. From the project categories in Table 1, an example are more energy efficient cooling systems, which could lead to an overall increase energy consumption if improvements enable the client to acquire more units or increase the capacity of an existing unit. Since refrigeration units run on electricity that can rely on fossil fuels to generate power, an increase in energy consumption could lead to CO₂ emissions. Sicredi should be aware of such effects and aim to avoid green bond funding of projects where the risk of rebound effects is particularly high.



Appendix 1: Referenced Documents List

Document Number	Document Name	Description
1	SICREDI Green Bond Framework	Issuer's framework for the creation of their green bond.
2	SICREDI Política – Sustentabilidade	Issuer's sustainability policy.
3	SICREDI Política – Gerenciamento de Risco Socioambiental	Issuer's social and environmental risk management policy.
4	SICREDI Ferramenta Cálculo Investimento Verde – Manual do Usuario	Issuer's user manual to apply the tool
5	SICREDI Inventário de emissões de efeito estufa – Ano inventariado: 2020	Issuer's GHG emissions 2020 inventory reported within the scope of the Brazilian GHG Protocol program



Appendix 2: About CICERO Shades of Green

CICERO Green is a subsidiary of the climate research institute CICERO. CICERO is Norway's foremost institute for interdisciplinary climate research. We deliver new insight that helps solve the climate challenge and strengthen international cooperation. CICERO has garnered attention for its work on the effects of manmade emissions on the climate and has played an active role in the UN's IPCC since 1995. CICERO staff provide quality control and methodological development for CICERO Green.

CICERO Green provides second opinions on institutions' frameworks and guidance for assessing and selecting eligible projects for green bond investments. CICERO Green is internationally recognized as a leading provider of independent reviews of green bonds, since the market's inception in 2008. CICERO Green is independent of the entity issuing the bond, its directors, senior management and advisers, and is remunerated in a way that prevents any conflicts of interests arising as a result of the fee structure. CICERO Green operates independently from the financial sector and other stakeholders to preserve the unbiased nature and high quality of second opinions.

We work with both international and domestic issuers, drawing on the global expertise of the Expert Network on Second Opinions (ENSO). Led by CICERO Green, ENSO contributes expertise to the second opinions, and is comprised of a network of trusted, independent research institutions and reputable experts on climate change and other environmental issues, including the Basque Center for Climate Change (BC3), the Stockholm Environment Institute, the Institute of Energy, Environment and Economy at Tsinghua University, the International Institute for Sustainable Development (IISD) and the School for Environment and Sustainability (SEAS) at the University of Michigan.

