CIF CLIMATE INVESTMENT FUNDS

CTF - Dedicated Private Sector Programs

DPSP III/IV-GESP/ DPSP V-FW

PROJECT TITLE: BRAZIL: DECARBONIZATION OF ENERGY-INTENSIVE VALUE CHAINS PROJECT

COUNTRY: BRAZIL

MDB: IBRD

<table>
<tr><th colspan="4">Concept Note for CTF Project/Program Approval Request[a]
Dedicated Private Sector Programs (DPSP-III/DPSP-IV-GESP/DPSP-V-Futures Window)</th></tr>
<tr><td colspan="2">Country/Region</td><td>Brazil</td><td>CIF Project ID#</td><td>Auto Generated by CCH</td></tr>
<tr><td colspan="2">For Regional/Global (country classification)
Please list all applicable sub-countries under Regional/Global country tagging (separated by semicolon “;”)</td><td colspan="3"></td></tr>
<tr><td colspan="2">Tier[1]</td><td colspan="3">☐ Tier 1 ☐ Tier 2 ☒ Tier 3</td></tr>
<tr><td colspan="2">Type of CIF Investment:</td><td colspan="3">☒ Public ☐ Private</td></tr>
<tr><td colspan="2">Project/Program Title (same as in CCH)</td><td colspan="3">BRAZIL: DECARBONIZATION OF ENERGY-INTENSIVE VALUE CHAINS PROJECT</td></tr>
<tr><td colspan="2">Sector/Pillar
(Please select all that apply)</td><td colspan="3">☐ Enabling Environment ☐ Energy Efficiency
☐ Energy Storage ☐ Renewable Energy
☒ Renewable Energy/ Energy Efficiency
☒ Transport</td></tr>
<tr><td colspan="2">Technology/Area
(Please select all that apply)</td><td colspan="3">☒ End Use ☐ District Heating ☐ Smart Grid
☐ Capacity Building ☒ Multiple ☐ Batteries
☐ Hydro ☒ Green Hydrogen ☐ Geothermal
☐ Wind ☐ Solar ☐Hydropower
☐ Cookstoves ☐ Waste to Energy
☒ Bioenergy ☐ Mixed RE ☒ Green Fuels
☐ Modal Shift ☐ Vehicle Technologies
☐ Mass Transit ☐Electric Vehicles ☐ Other (______)</td></tr>
<tr><td colspan="2">Project Lifetime (MDB Board/Management) approval to project closure</td><td colspan="3">5 years</td></tr>
<tr><td colspan="2">Is this a private sector program composed of sub-projects? (in years)</td><td colspan="3">☐ Yes ☒ No</td></tr>
<tr><td colspan="5">Financial Products, Terms and Amounts</td></tr>
<tr><td colspan="3">Financial Product</td><td>USD
(million)</td><td>EUR
(million)[b]</td></tr>
<tr><td colspan="3">PPG (Project Preparation Grant)</td><td></td><td></td></tr>
<tr><td colspan="3">Grant</td><td></td><td></td></tr>
<tr><td colspan="3">MDB Project Implementation and Supervision Services (MPIS)[2]</td><td></td><td></td></tr>
<tr><td colspan="3"></td><td></td><td></td></tr>
<tr><td colspan="3">First loss guarantee</td><td></td><td></td></tr>
<tr><td colspan="3">Second loss guarantee</td><td></td><td></td></tr>
<tr><td colspan="3">Equity</td><td></td><td></td></tr>
<tr><td colspan="3">Senior loan</td><td>60</td><td></td></tr>
<tr><td colspan="3">Senior loan in local currency hedged</td><td></td><td></td></tr>
</table>

[1] Country Tier definition as Per FY25 approved Pricing policy (page 8,9,19-25)
[2] MPIS - CIF Operational Modalities For New Strategic Programs here
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[b] For products denominated in EUR, please also provide USD equivalent in the column to the left.
[c] Please provide high-level information/appropriate links to relevant project documents and/or annexes as applicable.
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Senior loan in local currency unhedged **(EXCEPTIONAL REQUEST)**		
Subordinated debt/loan/ mezzanine instrument with income participation		
Subordinated debt/loan / mezzanine instrument with income participation local currency unhedged **(EXCEPTIONAL REQUEST)**		
Subordinated debt/loan /mezzanine instrument with convertible features		
'Convertible/contingent recovery' grant/loan/guarantee (loans convertible to grants or vice versa)		
Convertible Loans (convertible to equity only)		
For loans and guarantees – is this a revolving structure? [3] ☐ Yes ☐ No		
Specify local currency type here		
Other (please specify)		
Total	**60**	

Co-financing		
	Please specify as appropriate	**Amount (in million USD)**
MDB 1	IBRD	1,000
MDB 2 (if any)		
Government	BNDES	1,000
Private Sector		13,000
Bilateral		
Others (please specify)		
Total Co-financing		**15,000**
CIF Funding		**60**
Total Financing (Co-financing + CIF Funding)		**15,060**
Proportion of Total Financing for Adaptation		**0**
Proportion of Total Financing for Mitigation[b]		**100%**

CIF Financial Terms and Conditions Policy	Link Is this request in accordance with the CIF Financial Terms and Conditions Policy? ☒Yes ☐No (if no, please specify detailed information under the justification section)
Justification (exceptional request) [c][d]	

[3] With a revolving structure, after the loan or guarantee matures, instead of returning the funds to the Trustee, the funds are redeployed as a new loan or guarantee.

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Implementing MDB(s) *(please enter full name, job title and email address)*	
MDB Headquarters-Focal Point:	**Frank van der Vleuten** fvandervleuten@worldbank.org
MDB Task Team Leader (TTL)	David Vilar dvilar@worldbank.org
National Implementing Agency *(please enter full name, job title and email address)*	
Country Focal Point/s	Victor Dantas Zsigmond Director of External Financing victor.zsigmond@bndes.gov.br
Brief Description of Project/Program (including objectives and expected outcomes) [c][d]	

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This project aims to accelerate investment in markets for solutions to decarbonize energy-intensive value chains, mobilizing Brazil's enormous renewable energy capacity and potential for future expansion, and increasing energy efficiency. While Brazil could gain a domestic and external competitive advantage in utilizing its clean power resources to decarbonize the broader energy sector, the country faces significant barriers hindering the speed and volume of necessary investments. This project aims to support Brazil's ability to maximize opportunities from the economic expansion of these sectors, and maximize the country's ability to provide global benefits from the resulting cleaner productions.

Brazil has many of the conditions in place to stimulate green and inclusive economic growth. Brazil is Latin America's largest economy and the world's sixth largest GHG emitter[4]. Brazil's Nationally Determined Contribution (NDC) sets out the country's target to reach climate neutrality by 2050. The country has strong fundamentals to meet this target; in addition to its enormous potential for nature-based GHG removals, Brazil has a highly decarbonized power sector, with renewables accounting for over 45 percent of the Brazilian energy matrix and over 80 percent of its power matrix (compared to world averages of approximately 15 percent and 27 percent, respectively). Brazil's clean power system can facilitate decarbonization of other sectors of the economy that can be easily electrified. Hard-to-abate sectors that cannot easily electrify, such as industry and transport, will require innovative solutions.

Despite the favorable conditions Brazil has to support decarbonization of the energy-intensive value chains, key barriers remain that are slowing progress. A robust market sounding with relevant stakeholders demonstrates that barriers include high upfront capital costs associated with adopting innovative low-carbon technologies, lack of financial instruments tailored to support large-scale decarbonization, and perceived risks around new technologies, business models and value chains. Additionally, some industrial sectors in Brazil face uncertainties around regulatory frameworks that secure demand and the absence of clear incentives for transitioning to greener operations, further hindering the mobilization of private capital[5]. These challenges are compounded by limited access to climate and concessional finance, along with inadequate risk mitigation mechanisms, which make decarbonization projects less attractive to private investors. Moreover, these barriers are even more pronounced for local industrial players, due to their limited capacity to absorb high financial risks or navigate complex financial structures.

Concessional funding is essential to decrease the high capital costs necessary to unlock and accelerate the deployment of projects aimed at decarbonizing Brazil's energy-intensive sectors. It is estimated that the required investment to achieve Brazil's climate transition by 2030 amounts to approximately US$200 billion (BRL 1 trillion)[6]. Furthermore, the country faces high capital costs, with the basic interest rate (SELIC) soaring to 12.25 percent in December 2024, compared to 5.2 percent in the United States of America (SOFR) and 6.5 percent in India. In this context, the country's energy transition specifically demands a reallocation of capital and resources from traditional fossil fuel assets, such as oil refineries, thermal power plants, and natural gas pipelines, to cleaner alternatives. Furthermore, Brazil requires major enabling infrastructure to connect renewable energy loads and manage renewable variability; to modernize supply chains, especially of critical minerals and metals; to transport new commodities such as clean hydrogen, carbon dioxide, or advanced biofuels; and to expand energy efficiency.

The objective of this project is to catalyze investments in decarbonization of energy-intensive value chains in Brazil. The project will focus on supporting public and private investments. To achieve its objectives, the project

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[4] Emissions Database for Global Atmospheric Research (EDGAR). Net GHG emissions are roughly 1.7 gigatons of carbon dioxide equivalent (GtCO2e), accounting for approximately 2.5 percent of global emissions.

[5] https://www3.weforum.org/docs/WEF_Decarbonizing_Brazil percentE2 percent80 percent99s_Steel_Aluminium_and_Aviation_Sectors_2024.pdf

[6] https://www.weforum.org/publications/finding-pathways-financing-innovation-tackling-the-brazilian-transition-challenge/

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will lend resources to the Brazil's National Bank for Economic and Social Development (*Banco Nacional de Desenvolvimento Econômico e Social*, BNDES), which will act as the Financing Intermediary (FI). BNDES will establish a new credit line a US$1,060 million credit line, including US$1 billion IBRD loan and a US$60 million from the Clean Technology Fund (CTF), to provide debt financing to innovative sub-projects with high GHG mitigation potential and for which public support is required to overcome existing barriers to investment. The proposed operation focuses on supporting technologies and processes that have the high GHG emission reduction potential and support innovation to improve Brazil's long-term competitiveness.

The project seeks to catalyze new markets and accelerate investments that, due to barriers such as high technology risk and/or high capital costs, require concessional financing to bridge the viability gap. The project eligibility criteria will promote investments in innovation, including early movers/first-of-its-kind (FOIK) technologies in the country and business model innovation. Innovative technologies and frontier industries face significant uncertainties, creating a high level of risk for first movers which translate into challenging financing market-conditions for high-upfront CAPEX needs. This represents a key barrier to unlocking the investments at the scale needed for the green transition. Thus, the project will assist in overcoming early-mover financing challenges, by helping close the existing financing gap between green and traditional fossil-fuel based alternatives.

The Project is structured around two components, as further detailed in Table 1 below: Component (1) US$320 million to invest in emission mitigation technologies[7] that are critical for decarbonization of energy-intensive value chains (DEIC); Component (2) US$740 million to finance low-carbon fuel production projects and common and shared infrastructure that are required to de-risk and enable private sector investments for low-carbon fuel projects. IBRD resources for investment sub-loans will be disbursed by BNDES directly to the eligible sub-projects. BNDES will be responsible for supervising the compliance of the rules applicable to the credit line either at other financiers or at the agent of the syndicated loan, as detailed in the Project's Operations' Manual (POM). BNDES and beneficiaries receiving resources for sub-project implementation will be responsible for ensuring all resources received from BNDES are used and managed appropriately.

Table 1 - Project financing by component (in US$ million)

Project Components	*IBRD*	*CTF*	*TOTAL*
Component 1: Decarbonization of the energy-intensive value chains	300	20	320
Component 2: Low-carbon fuels production and common-user infrastructure for low carbon fuels projects	700	40	740
TOTAL	***1,000***	***60***	***1,060***
[%]	*94%*	*6%*	***100%***

Under Component 1, concessional credit lines will be deployed by BNDES to sub-borrowers for subprojects adopting innovative technologies that decarbonize energy-intensive industries (US$300 million IBRD, $20 million CTF Futures Window). This component will focus predominantly on supporting investments to directly

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[7] https://antigo.mctic.gov.br/mctic/export/sites/institucional/ciencia/SEPED/clima/arquivos/tna_brazil/1_TNA_report_mitigation.pdf

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decarbonize the energy and industrial value chains. Targeted investments include *inter alia* (1) energy efficiency and material efficiency in industries, (2) electrification of industries and/or green industrial hubs with renewable energy, and (3) utilization of sustainable feedstocks in hard-to-abate sectors. The detailed eligibility criteria will be defined in the POM prior to Negotiations.

Under Component 2, BNDES will on-lend the project resources to sub-borrowers financing low-carbon fuels production and common and shared infrastructure for low-carbon fuels production (US$700 million IBRD, $40 million CTF Futures Window). This component will focus on projects related to the production of low-carbon fuels such as Sustainable Aviation Fuels (SAF), second-generation biodiesel, e methanol and green hydrogen and its derivates such as green ammonia. Additionally, eligible investments can include shared infrastructure (such as electricity and water utility infrastructure, corridors, port or industrial area expansion or improvement, logistics) for clean hydrogen hubs, which can enable economies of scale and attract private investment in the hydrogen value chain. By investing in shared infrastructure, the upfront investment cost to each developer is reduced, while also giving greater confidence to investors that the infrastructure required for operations (for example, water, electricity, ammonia pipeline transportation and storage) will be in place to move toward their individual final investment decisions (FID).

Climate and concessional funds will be strategically allocated to accelerate innovation, maximize emission reductions, and mobilize private capital, based on the principles of minimum concessionality[8]. This operation will support BNDES in offering concessional loans to innovative decarbonization projects (lower interest rates and/or longer tenors). This will lower the overall cost of capital and improve project cash-flows, thereby reducing financing risks and helping to close the viability gap. Investment from BNDES, supported by the World Bank and the CTF, can also help to crowd-in other private sector investors who may otherwise be risk averse through a 'halo effect,' thereby crowding in private capital. Although the CTF funding represents a relatively small share of the total project size, the high level of concessionality compared to other sources of funding will enable BNDES to strategically apply higher levels of concessional funding to project most in need of support to reach financial closure.

BNDES will pass on the cost of the IBRD and CTF funding, its administrative costs, and the expected risk of default to the sub-borrowers using the principles of minimum concessionality, to be further defined in the Project Operations Manual (POM). The CTF concessional resources will be blended with other sources of financing according to the sub-project needs. The project's funding will be blended with sponsors' equity, other sources of public financing (e.g., other BNDES credit lines), and, whenever possible, commercial financing from local or international lenders (including IFC). The World Bank and IBRD teams have already been engaging to identify opportunities for collaboration, as well as to ensure that investments supported by this project do not crowd-out private financing. Additional workshops and market soundings will be conducted to support the definition of eligibility criteria to maximize the private capital mobilization potential of the project.

Beyond the specific project investments, the project seeks to support the government's ambitious agenda to revive its energy-intensive value chains as an engine of sustainable economic growth. In 2024, Brazil launched its New Industrial Program ('*Programa Nova Indústria Brasil*, "NIB"), structured around six Missions aimed at fostering technological innovation, increasing productivity, and promoting green job. Mission 5 '*Bioeconomy, decarbonization, energy transition and energy security'* sets out the Government's objective of reducing the GHG intensity of industrial GDP by 30 percent by 2033 and increasing the share of biofuels in the transport energy

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matrix by 50 percent. BNDES is tasked with playing a lead role in implementing the NIB. In 2024, Brazil passed the *Fuel of the Future* law (Law No. 14,993/2024), which requires the aviation sector to cut GHG emissions by 1 percent per year from 2027 (against a 2026 baseline), reaching 10 percent by 2037[9]. This Bill also proposes that by 2030, at least 5 percent of conventional jet fuel be replaced with SAF that reduces lifecycle greenhouse gas emissions by 85 percent or more. Brazil has also launched its National Hydrogen Plan (PNH2), which envisages a huge potential for industrial decarbonization through clean hydrogen development, including links to new e-fuels (ammonia, methanol and other synthetic liquid hydrocarbons), promising alternatives for decarbonizing the aviation and shipping sectors. The Brazilian Government recently approved the Brazil Hydrogen Bill (2308/2023) which provides the regulatory framework and contains fiscal incentives for low-carbon hydrogen production.

This project also seeks to directly support implementation of Brazil's recently launched the Climate and Ecological Transformation Investment Platform (*Plataforma Brasil de Investimentos Climáticos e para a Transformação Ecológica*, BIP), a strategic initiative launched in 2024 to establish a platform that connects project sponsors and prospective financial institutions**.** The BIP will foster public-private collaboration across relevant stakeholders and initiatives by focusing on three main sectors: (i) nature -based solutions & bioeconomy, (ii) industry & mobility; and (iii) energy[10]. BNDES will act as the Secretariat for the platform providing general administrative and project management support, as well as coordinating relations with financial institutions. As of December 2024, seven projects have been approved, including two projects for energy – i.e., sustainable fuels and low-carbon hydrogen – and two projects for industry and mobility – i.e., strategic minerals and low-carbon steel[11]. The Federal Government has indicated its interest to utilize the BIP to identify a pipeline of projects that need concessional funding, and this project will serve as a first pilot for channeling concessional funding to these projects, via BNDES.

The project will measure the following outcomes under its results framework:

- Greenhouse gas emissions reductions achieved (MtCO2e);
- Capital mobilized for energy and industrial decarbonization investments; of which,
    - Private sector capital mobilized;
    - Public sector capital mobilized;
- Energy savings (GWh)
- Female employees as part of total receiving technical training on innovative decarbonization technologies (%);
- New green jobs created (#).

[8] This will be based on the IFC's methodology to assess minimum concessionality. It will also incorporate developments related to the ongoing initiative amongst MDBs and DFIs to establish Principles for Concessional Finance for Public Sector Operations. The methodology for assessing minimum concessionality will be specified in the Project Operations Manual prior to the Decision Meeting.

[9] https://www.gov.br/planalto/en/latest-news/2024/10/lula-enacts-fuel-of-the-future-law-201cbrazil-will-drive-the-worlds-largest-energy-revolution201d

[10] https://www.gov.br/fazenda/pt-br/acesso-a-informacao/acoes-e-programas/transformacao-ecologica/bip/arquivos/bip-executive-presentation-en-2.pdf

[11] https://www.gov.br/fazenda/pt-br/acesso-a-informacao/acoes-e-programas/transformacao-ecologica/bip/brazil-climate-and-ecological-transformation-platform

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Consistency with investment criteria (please refer to design document)[12][c][d]

[12] Link to ACT Design Document here and Future Window Design Document here

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The project is fully consistent with the investment criteria of the CTF Futures Window, particularly in terms of supporting industrial energy efficiency, sustainable transport, and emerging clean technology sectors.

Energy Efficiency (EE): Funding from this project can be on-lent by BNDES to investments in industrial energy efficiency, focusing on energy-intensive industrial value chains. Such investments will reduce emissions and help industries improve productivity and increase their competitiveness. Investments in EE are also good sources of green job creation.

Sustainable Transport: Funding from this project can be on-lent by BNDES to investments in innovative clean fuels, such as green hydrogen and its derivatives (e.g., green ammonia), biodiesel, biomethane, and sustainable aviation fuels (SAF), all with a focus on domestic utilization. The clean fuels will support CO2 emission reductions in the transport sectors, including road, air and marine transport. This will contribute to a broader goal of sustainable development, which encompasses cleaner and more efficient transport systems.

Emerging Clean Technology Sectors: As per the investment criteria, this category of eligible investments is broader and can provide "opportunities to… new areas of zero-carbon development" as they emerge. Innovative sectors that can be supported by this project include material efficiency, Carbon Capture, Utilization, and Storage (CCUS) when other emissions reducing technologies are not feasible, Direct Reduced Iron using green hydrogen, etc.

This project is also fully consistent with ongoing and envisioned future IBRD support to Brazil to implement its strategy of deploying CIF resources to accelerate domestic emissions reductions.

For example, the IBRD is currently preparing an investment operation with funding from the CIF-REI program to support investments in shared infrastructure for the green hydrogen hub being developed in the Port and Industrial Complex of Pecém in the State of Ceará in the northeast region of Brazil. This proposed credit line with BNDES will build on the knowledge that has been developed in the preparation of that project by supporting shared infrastructure at green industrial hubs, such as storage facilities for green ammonia. This will allow for the catalytic impact of CIF support to continue to be scaled-up for shared infrastructure investments that are critical to enable private sector financing for innovative technologies that will support decarbonization of hard-to-abate sectors.

This project is also aligned with Brazil's intention to submit an Expression of Interest (EOI) under the CIF's recently launched Industrial Decarbonization Program (IDP). The project will support investments that are strategically aligned with this new program, but that require concessional financing in the short-term. This project will be presented to the World Bank Board for approval in July 2025, well before CIF_IDP funding could potentially be available. If Brazil is invited to prepare an Investment Plan, this project can help to inform the preparation of that plan, and additional financing for this project (alongside additional WB funding) could potentially be considered by the Government of Brazil for support from CIF-IDP resources.

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Social Inclusion and Stakeholder Engagement [c][d]
IBRD has led a dialogue with the Government of Brazil over the past three years focused on clarifying emerging areas of clean energy development. This dialogue has been materialized by the Government of Ceara's request for IBRD along with CIF-REI support to help in the integration of vast volumes of renewable electricity for the production of green hydrogen in the Industrial and Port Complex of Pecém (CIPP). IBRD has also undertaken technical assistance for the federal government with support of ESMAP as part of the national hydrogen program to help identify hubs and economic areas of competitiveness for Brazil to initiate investment in nascent markets related to hard-to-abate liquid fuels and industrial electrification. The IBRD has undertaken multiple rounds of market soundings with the private sector (e.g., sponsors interested in investing in green hydrogen, green ammonia, green steel, energy and material efficiency in large industries, among others), as well as other potential financiers (including IFC) to understand the market barriers and demand for this type of dedicated credit line supported by concessional funding. The private sponsors have expressed a strong interest in investing in Brazil, but they have highlighted the high risks associated with these innovative projects (uncertain market demand, viability gaps due to high costs), as well as the lack of access to concessional funding that can help mitigate these risks through decreased financing risk / debt repayment risk. The Project will incorporate into its design best practices for continued stakeholder involvement and to ensure the project can maximize social and environmental benefits. BNDES will ensure that a) all sub-borrowers will conduct stakeholder engagement in a manner proportionate to the risks and impacts of their subprojects and b) all sub-borrowers implementing subprojects categorizes as high risk will disclose relevant environment and social risk management instruments and monitoring reports. Furthermore, BNDES will disclose information on the subprojects financed through its external communication channels and respond to public enquiries and concerns in a timely manner through its Grievance Mechanism.

Gender Considerations [c][d]	
Gender Analysis (Please insert the text from the project document on the analysis of gaps in access to services, markets, and jobs by women in relation to the project sectors)	The proposed operation will strengthen gender equality and diversity promotion initiatives carried out under BNDES' Gender Equity and Diversity Valuing Policy. This policy affirms the organization's commitment to eliminate all forms of inequality and discrimination in BNDES' workplace and in the institutions that participate in its relationship chain. The proposed Project aims to promote gender equality and diversity, while supporting the implementation of BNDES Action Plan on Gender and Diversity. An assessment is being carried out with BNDES' counterparts to identify and address current challenges and areas of improvement through initiatives in three fronts i. people management; ii. organizational culture; iii. operations.

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Gender Activities (Please insert the text describing gender-specific activities included in the project)	The proposed Project will strengthen gender equality and diversity promotion initiatives carried out under BNDES' Gender Equity and Diversity Valuing Policy. The project will support BNDES to close the gender gap by implementing technical training programs to build capacity of BNDES staff, with a focus on its female staff, to conduct due diligence of the proposed sub-loans to financing innovative technologies under the project (e.g., green hydrogen and its derivatives, SAF, etc.).
Gender Indicators (Please insert the text on selected gender specific indicators, including annual targets. from the Project Log Frame that the project is committing to report on)	The project will include at least one indicator, which will meet the World Bank's requirements for closing the gender gap (Gender Tag). The proposed indicators are as follows: -Sexual harassment complaints that are handled according to the protocol created (Percentage) -Gender mainstreaming guide for industrial and energy companies adopted and published
Just Transition [c][d]	

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Just Transition Analysis	The industrial sector is responsible for approximately 20% of all employment in Brazil[13], hence the clean transition of this sector must be just and inclusive to maximize the economic benefits and ensure its long-term sustainability. Studies by the International Energy Agency and the International Labor Organization indicate that investments in renewable energy and energy efficiency have the potential to create a substantial number of new, quality jobs[14]. Biofuels currently represents about half of all clean energy jobs globally, and this project can support investments to develop jobs through new value chains for biofuels, including engaging rural communities to support a just and inclusive transition. Investments in the circular economy – for example recycling of scrap steel and plastics –are expected to be sources of new jobs. Finally, studies suggest that the green hydrogen industry could generate direct, indirect, and induced jobs across emerging markets and developing countries (EMDCs) due to the intensive nature of hydrogen production, transport, and infrastructure development. Globally, the hydrogen economy is projected to create around 30 million jobs by 2050, and half of the share of these opportunities could emerge in the Global South, particularly in countries such as Brazil with large endowments of renewable energy resources[15].

[13] https://www.statista.com/statistics/271042/employment-by-economic-sector-in-brazil/

[14] https://www.iea.org/reports/world-energy-employment-2023/ and Green Jobs: Towards Decent Work in a Sustainable, Low-Carbon World, UNEP/ILO/IOE/ITUC, September 2008

[15] World Bank, Hydrogen For Development (H4D) initiative.

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Just Transition Activities	BNDES places high importance on fostering green job creation by financing projects that support renewable energy, sustainable infrastructure, energy efficiency, and environmental conservation. The proposed lending operation will support BNDES to investment in decarbonization of the energy and industrial value chains, in areas such as industrial energy efficiency, circular economy, electrification of industrial processes with renewable energy, and fuel switch with innovative technologies such as green hydrogen and advanced biofuels. This will support Brazil in reaching its objectives set out in the NIB to stimulate innovation, productivity and competitiveness in order to generate high-quality jobs.
Just Transition Indicators	BNDES tracks the job creation benefits of all its direct lending operations. The project will include an indicator to track the number of green jobs created through the sub-loans provided by BNDES. The precise target for this indicator will be agreed prior to Negotiations.
Expected Results (M&R)	
Project/Program Timeline	
Expected MDB Board Approval date[d]	July 2025
Expected project closure date[d]	July 2030
Expected lifetime of project results in years (including beyond project closure)	22
CTF Core Indicators	**Relevance (Yes/No) and Target**
Please identify which of the indicators below are relevant to the project concept (Yes/No). If possible, report indicative targets. (Note: Targets and disaggregated targets will be required by the CIF project proposal stage.)	
CTF 1: Tons of GHG emissions reduced or avoided (mt CO_2 eq)	9.6 MtCO2e = annual
CTF 2: Volume of direct finance leveraged through CTF funding ($)	*Indicator calculated from the co-financing section below*
CTF 3: Installed capacity (MW) as a result of CTF interventions	
CTF 4: Number of additional passengers using low-carbon public transport as a result of CTF interventions	
CTF 5: Annual energy savings as a result of CTF interventions (GWh)	**600 = annual**
GESP 1: Energy rating of storage systems installed (MWh)	
GESP 2: Power rating of storage systems installed (MW)	

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GESP 3: Number of GESP-supported policies, regulations, codes, or standards adopted for energy storage issues	
CTF Co-Benefits	**Targets**
Please identify one or more expected co-benefit-indicators-I.e, other social, economic, environmental benefits beyond CTF core indicators- that the project will track and report.	
CTF Co-Benefit *(e.g., Gender, employment, energy access, social inclusion, health and safety, fuel savings, competitiveness and industrial development, SDGs):*	• Sexual harassment complaints that are handled according to the protocol created (Percentage, increasing up to 100% by 2029) • Gender mainstreaming guide for industrial and energy companies adopted and published (Yes/No) Minimum of [50] percent of female employees as part of total receiving technical training on innovative decarbonization technologies; • [5,390] new green jobs created;[16]
Expected Date of Committee Approval	Dec 2024
Expected Date of MDB Board Approval	July 30, 2025
Additional Details (to Members)	

Version: October 2024

Link to Documents Management – here

CCH – here

CIF Website – here

CIF Pipeline Management and Cancellation Policy - here

CIF Financial Terms and Conditions Policy updated for FY24 - here

CIF Operational Modalities For New Strategic Programs - here

CTF M&R Toolkit – here

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16 The preliminary 'direct green jobs creation' estimation considered the sectoral direct job multipliers estimated in "Teixeira et al., 2022, Revisitando o modelo de geração de emprego do BNDES: atualização do cálculo do efeito-renda, 2022). This estimate considers an indicative portfolio of investments in clean fuel production and decarbonization of steel and cement sectors, based on the availability of data.

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CTF (DPSP V-FUTURES) Futures Window Design Document - here

GESP Indicative Pipeline and Monitoring and Reporting Approach - here

GESP Program Monitoring and Reporting Toolkit – here

ACT Design Document - here

FY25 Pricing Policy - here

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