Climate Innovation Regional Program
Inter-American Development Bank Group

For submission to the CTF Trust Fund Committee

Contents

List of Acronyms and Abbreviations

C2F	Canada Climate Fund for the Private Sector in the Americas
CIF	Climate Investment Funds
CIRP	Climate Innovation Regional Program
CO_2eq	Carbon Dioxide Equivalent
CTF	Clean Technology Fund
DELTA	Development Effectiveness Learning Tracking and Assessment Tool
DFI	development finance institution
DPSP	Dedicated Private Sector Program
E4DF	Equity for Development Fund
EE	energy efficiency
EPC	engineering, procurement and construction
EUR	Euro
GHG	greenhouse gases
GW	Gigawatt
GWh	Gigawatt-hour
i3-0	Innovative Instrument for Investment in Zero-Carbon Technologies
IDBG	Inter-American Development Bank Group
LAC	Latin America and the Caribbean
MDB	Multilateral Development Bank
MPIS	MDB project implementation services
MW	Megawatt
MWh	Megawatt hour
NCRE	non-conventional renewable energy
NOx	nitrogen oxides
PM	particulate matter
PPA	power purchase agreement
PV	photovoltaic
RE	renewable energy
RE+	renewable energy plus
SDGs	Sustainable Development Goals
ST	Sustainable Transportation

1. Program Description

1.1. Background. The CTF Futures Window

At its January 2022 meeting, the Clean Technology Fund (CTF) Trust Fund Committee (TFC) approved the CTF Futures Window, which allows for the programming of cancelled resources using the processes and standards established under Phase III of the Dedicated Private Sector Program (DPSP).

Since its approval in 2013, the DPSP has been a prominent part of the CTF program. The DPSP has been the primary source for new projects since all CTF countries completed their original investment plans.

Expanded Country Access to all Climate Investment Funds (CIF) Countries, well defined priority investment areas, a diversified product offering (including local currency features) and a well-established pipeline cancellation policy have created a conducive environment to deploy blended finance resources in private sector operations under the DPSP III window. In that context, IDB Invest was granted approval of the program Innovative Instruments for Investment in Zero-Carbon Technologies (i3-0) Phase I in July 2018 (for US$ 35 million) and the program i3-0 Phase II in February 2020 (for US$ 26 million).

In line with the recommendations of CIF Secretariat and the Multilateral Development Banks (MDBs), the Futures Window extends the objectives and principles, country access model, and thematic investment areas that were established under DPSP III, namely **energy efficiency**, **renewable energy plus**, and **sustainable transport**, through January 2025.

1.2. Strategic context

To achieve the climate mitigation and adaptation objectives of the Paris Agreement, every sector of the global economy needs to transform. Innovation in decarbonization-enabling technologies or those enabling the electrification of other sectors, becomes necessary to unlock the net-zero pathways. Investments in climate innovation can drive significant economic and development benefits, including increased productivity and job creation[1] [2].

Latin America and the Caribbean (LAC) faces the same challenges and sectoral transformation, led by an increasing penetration of renewable energy, improvements in energy efficiency and the expansion of sustainable transportation, is of the essence to pave the way towards net-zero objectives.

In a context of population growth, the electricity demand in LAC is projected to increase by 48% from 2020 to 2030[3]. Without significant changes in energy mixes and expansion plans, LAC will fall short of the goal of net-zero emissions by 2050.

[1] For example, the European Union's (EU) Finance for Innovator's program ("InnovFin") has deployed approximately over EUR €14 billion in investments to 110 innovative projects and companies, and 11,000 innovative early-stage enterprises, small medium enterprises and mid-cap companies. These investments have supported nearly 600,000 jobs in 42 countries across the EU (and other countries). [EIB, 2018].

[2] As a result of an IDB study, Ravillard et al. (2021) conclude that investing US $1 million in new energy services companies (related to the energy transition, such as battery storage projects, distributed generation project design, and demand management options) can create 11 to 36 direct jobs while investing the same amount in the generation sector only creates 3 to 11 direct jobs.

[3] The energy path of Latin America and the Caribbean/ Rigoberto Ariel Yépez-García, Yi Ji, Michelle Hallack, David López Soto.

A recent IDB study[4] indicates that the region plans to reduce reliance on carbon by an average of 5.4% each year. Meanwhile, solar is expected to increase by 10.4% and wind power should rise by 9.1% every year. Hydrogen also has the potential to play an important role in the energy transition, especially in sectors where it has historically been difficult to cut emissions, such as long-distance transport and heavy industry.[5]

Energy efficiency and the expansion of electromobility are set to play a key role in the energy transition in LAC. If countries in the region achieve energy efficiency standards of the International Energy Agency (IEA), regional electricity demand would drop by 25.9%. The above-mentioned IDB study finds that in the most optimistic scenario for electric vehicle adoption, approximately 53 million electric vehicles (EV) would be on the region's roads by 2030. This number is equivalent to 20% of the total estimated vehicle fleet by then. This scenario would cut a cumulative total of 616 MtCO2e over 10 years.

To deploy climate technologies and the implementation of business or financing models enabling their significant scale-up to achieve decarbonization objectives, concessional investments using risk-tolerant instruments (such as early-stage capital, growth capital or risk-sharing and mezzanine solutions) are needed to ensure that climate finance supports higher levels of climate innovation in developing countries for mitigation purposes.

1.3. Barriers to private sector investment in climate innovation

The barriers to investments in climate related innovative technologies or business models in developing countries include, amongst others:

- **Lack of capital** to support the early stages of the product or business model life cycle due to perceived higher technology risks, longer paths to reach scale and poor enabling environments.
- **Limited enabling environment for climate technology** and venture capital investment in developing countries, including insufficient capital, market development and technical assistance to advance innovative products/processes through the prototype, demonstration and early adoption phases. Therefore, many technology and venture-focused companies and organizations, including technology transfer offices, often fail to survive.
- Few business models or **limited expertise to facilitate the rapid transfer and adoption of different technologies** – particularly those that are largely rooted in developed (high-income) countries, e.g., electric vehicles – into newer and often untapped developing country markets. Developing markets are often considered to be a more complex environment to develop early-stage technologies and innovations.
- **Lack of knowledge** between the public and private sector on how best to identify, assess and scale up early-stage technologies and innovations together. While pockets of initiatives and investments can be found both in public and private sector entities in developing markets, the deepening of knowledge on best practices, as well as the sharing of learnings between public sector actors, is not available, reducing the appetite from some organizations to take new risks.

Given these barriers, the CIRP will strive for a combined approach using Technical Assistance and Blended Finance to accelerate market development in countries where climate innovation investments are yet to emerge and scale up investments in other countries where a pipeline is developing.

[4] Ibid

[5] Five things you should know about the green energy transition in Latin America and the Caribbean/ Rigoberto Ariel Yépez-García

1.4. Program choice: a flexible demand-driven approach to private sector innovation

The prevailing argument for the catalytic effect of blended finance is that it can **generate knowledge and/or production networks spillovers**, which can have economy-wide effects in increasing productivity and contributing to growth, in addition to generating positive social and environmental externalities.

The first case is anchored around the thesis that from an economics standpoint, information is an externality. Once created, and unless patented, it is "freely" reusable without being depleted. There are therefore limited incentives for companies to invest in knowledge which would freely benefit its competitors. A typical illustration is underinvestment in Research and Development (R&D) and its negative effects on competitiveness, productivity, and growth.

A concrete application to blended finance is that it can encourage companies to experiment new technologies, business models or financing templates for the immediate benefit of increasing their bottom line, but with the developmental goal of generating knowledge spillovers. In the words of economists Dani Rodrik and Ricardo Hausmann, *"there is great social value to discovering that cut flowers, soccer balls, or computer software can be produced at low cost [in a country], because this knowledge can orient the investments of other entrepreneurs. But the initial entrepreneur who makes the "discovery" can capture only a small part of the social value that this knowledge generates"*.[6]

MDBs are ideal partners to establish testing grounds for self-discovery. Not only their public ownership allows them to play a role of honest broker, reducing the risk of conflict of interests or funds misuses, but their multi-countries reach generates regional spillovers. If the purpose of blended finance is to encourage self-discovery the outcome of which is unknown, **the institution that extends blended finance may not necessarily be "aware" of that opportunity before encountering concrete project opportunities**. Thus, blended finance programs that are overly prescriptive or supply-driven (e.g., in terms of sector, instruments, geographies etc.) tend to be less successful in supporting "self-discovery" approaches, on top of, possibly ending up being non-additional, or worse, distort a market that did not require subsidies.

A program conceived to test and scale climate innovation in LAC will require a flexible demand-driven approach that in practical terms is reflected by the following features embedded in the design of the CIRP Program:

- **Thematic approach:** The CIRP will remain open to the all the sectors and topics referred in the Futures Window proposal, namely Renewable Energy Plus, Energy Efficiency, Sustainable Transportation and Emerging Clean Technologies.
- **Geographic approach:** The CIRP resources will be available to all the LAC Countries eligible by the CIFs in 2023, namely **Bolivia, Brazil, Colombia, Ecuador, Guatemala, Guyana, Haiti, Honduras, Jamaica, Mexico, Nicaragua, Peru**.
- **Product approach:** The CIRP will remain open to the widest array of products available, including grants for technical assistance, equity investments in funds (and equivalent) or directly into companies, guarantees, mezzanine/subordinated debt and senior debt. The product allocations indicated in this document for IDB Invest Blended Finance Climate Innovation Scale Up Window (US$ 20.0 million) are indicative (within direct equity investments, guarantees,

[6] Hausmann, Ricardo and Rodrik, Dani, Economic Development as Self-Discovery (May 2002). NBER Working Paper No. w8952, Available at SSRN: https://ssrn.com/abstract=313653

mezzanine/subordinated debt and senior debt) to ensure consistency with a demand-driven approach.[7]

- **Use of Technical Assistance**: The Technical Assistance Window will be funded with US$ 3 million in grants designed to support knowledge generation, provision of advisory services, and capacity building to facilitate investment in high-impact projects and companies.
- **A dedicated window for Early-stage capital investments** will be funded with US$ 5 million to enhance the role of concessional finance to promote innovation and diversify the array of recipients of concessional funding via the IDB Lab's Equity for Development Fund (E4DF).

1.5. Detailed description of the Program

1.5.1. Program objective.

Within the perimeter of the CTF Futures Window, the IDB Group is proposing the **Climate Innovation Regional Program (CIRP)** for the private sector expanding the scope of previous programs with (i) early-stage climate innovation with an IDB Lab window aligned with the rationale of the CIF Climate Ventures Window, (ii) demonstrating the commercial viability of emerging decarbonization technologies and business models, and (iii) an enhanced use of Technical Assistance (TA) to support climate innovation across each stage of the commercial sustainability cycle.

The CIRP will be composed of three windows that will establish a coherent intervention using blended finance resources throughout the stages of the commercial sustainability cycle of climate innovation across IDB Invest and IDB Lab.

a) **The Technical Assistance Window** (US$ 3.0 million)

b) **The IDB Lab early-stage Climate Innovation Window** (US$ 5.0 million)

c) **The IDB Invest Blended Finance Climate Innovation Scale Up Window** (US$ 20.0 million)

1.5.2. Sectors/technology.

The CIRP Program will address technologies that are consistent with a long-term pathway to net-zero emissions. The Program will cut across the four thematic areas of the CTF Futures Window remaining open to support new emerging clean technology sectors that meet CTF criteria and this Program's specific objectives. The four thematic areas of the CTF Futures Window are the following: **Renewable Energy Plus (RE Plus), Energy Efficiency, Sustainable Transport and Emerging Clean Technology Sectors.**

The E4DF focuses on climate innovation, with an investment thesis including mitigation, adaptation, and restoration tech-based startups. The climate mitigation vertical is aligned and contains the four thematic areas of the CTF Futures Window: **Renewable Energy Plus (RE Plus), Energy Efficiency, Sustainable Transport, and Emerging Clean Technology Sectors.** Considering this, E4DF will invest a minimum of **US$ 5 million** (CTF investment) in early-stage startups aligned with CTF Future Window specific sectors.

1) Renewable Energy Plus

The concept of Renewable Energy (RE) Plus under DPSP III was defined based on the changing role of concessional public financing in the sector. In the past, RE investments were mainly for supporting the first use of RE technologies in a country by providing gap-filling finance to turn RE projects economically

[7] In any event the amount of grants allocated to the CIRP will be limited to **up to US$ 3 million**

viable. With reduced technology costs and lower perceived risks, conventional wind and solar energy require less public concessional financing now than they did in the previous decade. RE Plus aims for scaled-up RE deployments by de-risking private investments and increasing viability gap funding. There is still potential for this concept in CIF low-income countries where the installation of renewable energy technologies remains underdeveloped. Distributed RE generation and waste-to-energy were covered under DPSP III RE Plus, and thus would remain eligible under the CTF Futures Window. Distributed generation complements grid connected RE generation in scaling up RE deployments. With relatively fast installation and fewer grid-connection challenges, distributed RE generation is increasingly competitive with centralized generation. Similarly, waste-to-energy technology with net greenhouse gas reduction brings the same benefits.

2) Energy Efficiency

Energy efficiency under the CTF Futures Window is a broad thematic area that includes efficiency markets for municipal, commercial, and residential consumers. Municipal energy efficiency includes street lighting, improvements in water utilities, energy management systems, tri-generation, and other efficiency measures for public buildings. Commercial and residential efficiency includes pumps and efficient appliances, lighting, HVAC, and irrigation systems. The Futures Window could be well-positioned to provide special attention on energy-efficient cooling.

3) Sustainable Transport

The CTF Futures Window may also support the adoption of electric vehicles in addition to the original scope of sustainable transport thematic area under DPSP III. The technologies supported under DPSP III include public transportation such as rail and bus rapid transit, integrated traffic management systems and Integrated Operations Control Center (IOCC), green logistics in maritime and intermodal transport, and other fuel and energy-efficient technologies.

4) Emerging Clean Technology Sectors

The type of clean technologies that CTF can support are not limited to the three categories above, and opportunities to provide resources for new areas of zero-carbon development continue to emerge. Sectors related to energy and resource efficiency, such as green building certification (specifically carbon neutrality goals) in the building sector or wastewater and solid municipal waste management are examples where there is currently burgeoning demand for concessional resources. Other areas that may be adjacent to the thematic areas above can be submitted to the Futures Window for consideration by the TFC on a case-by-case basis.

In that context, **the CIRP will promote transversally across its 3 windows the advance of green hydrogen in Latin America and the Caribbean in sectors where there is a credible path towards commercial sustainability**. In that frame, the availability of technical assistance resources and donor funds will become critical to support both policy dialogue and the first pilot projects in the region. Amongst others, Brazil, Colombia and Costa Rica have already unveiled initiatives to foster their strategic position in this sector. The CIRP will prioritize the applications of green hydrogen based on the principle of minimum concessionality to support those applications better positioned to achieve commercial sustainability.

1.5.3. Targets.

The CIRP Program aims to finance at least 3early-stage startup investments and deliver at least 3 scale-up projects with strong demonstration value or large-scale replication, using cutting-edge climate mitigation technologies, business or financing models across the thematic priorities of the CTF Futures Window. **Subject to the availability of resources and the timeframe of the investments, IDB Invest will**

prioritize supporting the scale-up of at least 1 of the early-stage investments of the E4DF using CTF resources.

In terms of mobilization, the CTF US$ 5 million contribution to IDB Lab's E4DF aims at mobilizing US$ 40 million of public funding to complete the target size of the fund (i.e. the Korea Venture Investment Corp commitment)[8],and additionally, IDB Lab's will invest its own resources in the investee companies of the E4DF on a 30:70 ratio (IDB Lab's own capital: E4DF resources). The E4DF expects to mobilize additional resources towards its portfolio of investee companies on a ratio of 1 to 4.

On the IDB Invest side, based on the actual results achieved by the previous DPSP III Programs at IDB Invest[9], the US$ 20 million contribution is expected to mobilize co-financing from IDB Invest's own capital for US$ 40 million and US$ 100 million from the private sector, together with US$ 5 million of parallel concessional financing.

In aggregate, the US$ 28 million investment contribution from the CTF[10] is expected to mobilize **US$ 42 million** from IDB Group own capital (~1:2 ratio), US$ 100 million from the private sector, US$ 40 million from public funding in the E4DF and US$ 5 million from other sources of concessional funding for an aggregate mobilization of **US$ 187 million** (~1:6.7 ratio).

To estimate the impact indicators of the Program we have utilized a portfolio of past blended finance investments at IDB Invest[11]. Based on the results of the simulation, the CIRP indicatively is expected to displace **175,000 tons of CO2e** per year, promote the installation of **76 MW** of renewable energy capacity, transfer **28,000 passengers** towards low-carbon transportation methods, and save **344,000 MWh** across the life of the Program.

1.5.4. Financial instruments.

Flexibility on financial instruments is paramount for supporting each project with the most adequate tool relative to the stage of the project/company, transaction context, and risk profile – especially given the early-stage to scale continuum of the CIRP program.

In all cases, however, the instrument will be selected based on an assessment of how to provide the best solution to ensure financial closing of the operation and the achievement of its related development objectives.

Financing instruments relevant to the CIRP Program's goals are:

- Early-stage Venture Capital, in the form of flexible forms of quasi-equity and equity (e.g. SAFE, convertible debt, priced equity), for tech-based startups in their early stages,

[9] The aggregated results of IDB Invest's i3-0 and i3-0 Phase II Programs show that CTF resources for an amount of US**$ 54.7 million** have been invested in **10 transactions** since 2018, mobilizing **US$ 110.8 million** from IDB Invest's own capital (~1:2 ratio) for a total amount of investments of **US$ 470 million** (~1:9 ratio) by mobilizing US$ 292.1 million from the private sector and US$ 12.5 million from other concessional funding.

[10] Including a US$ 3.0 million grant component for technical assistance and capacity building.

[11] The synthetic portfolio is composed of a CTF US$ 4 million equity investment (**Kingo Energy - Guatemala**), a CTF US$ 5 million guarantee in residential solar (**Bright Distributed Generation - Mexico**), a CTF US$ 7.6 million subordinated loan in a utility-scale solar PV project (**PV Llanos 3 - Colombia**), and a UK Sustainable Infrastructure Program US$ 10 million senior loan financing an electric bus fleet in Bogota (**Guagua Fontibon Electric Bus Project - Colombia**). Due to the age of these investments, we have used projections at approval of these transactions, and we have normalized the results adjusting to the amounts available for investment in the CIRP (US$ 25 million).

- Scale-up Risk Capital, including equity and mezzanine solutions - aiming to provide flexible form of capital where still not commercially available, while also crowding in commercial capital.
- Risk-management instruments, mainly in the form of guarantees - aiming to address investment-specific risks.
- Debt instruments (senior and subordinated) –, addressing funding gaps and feasibility constraints to scale-up innovative technologies and business models.

In addition, the CIRP Program will aim to replicate and mainstream results-based incentive models embedded in the financial instruments mentioned above that have been successfully implemented by IDBG. These incentives have been selectively structured to promote further adoption of clean technologies (e.g. increase penetration of electric buses in bus concessions) or to promote gender, diversity and inclusion activities as part of the roll out of clean investments.

1.5.5. Mobilization strategy.

The CIRP Program will mainly target the following types of co-lenders/co-investors:

- **Public sector investors:** The IDB Lab will mobilize public sector investors for investments in disruptive early-stage startups in the form of participations into the E4DF (see Annex 2 for further detail). This includes national sovereign wealth funds, national development banks, among others.
- **Impact investors:** by using the scale-up equity and mezzanine instruments, the IDB Invest will seek to mobilize private capital impact-oriented and other sources of concessional finance while influencing the adoption of better governance practices and social and environmental standards into investee companies.
- **Commercial banks (either as co-lenders, B-lenders or intermediaries):** Through the use of risk-management solutions, IDB Invest will seek to crowd in banks into investments that are out of their comfort zone, either because of technology, geographic, tenor or other considerations. Main focus will be on mobilizing them for non/limited-recourse financing and/or as financial intermediaries supporting them in assessing the climate risk in their portfolios and identifying growth opportunities in new market segments.

Through these avenues, the Program seeks to generate investments on the range of **US$ 215 million** on a **1:6.7 ratio** (per each dollar invested by the CIRP, 6.7 dollars of climate investments will be mobilized).

1.5.6. The Technical Assistance Window

The Technical Assistance (TA) Facility has been designed to support knowledge generation, provision of advisory services, and capacity building to facilitate investment in high-impact projects and enterprises. IDB Group's experience shows that enabling high impact projects that simultaneously incorporate technological or business model de-risking combine innovative financial solutions with non-financial additionality, often via TA.

Traditionally, IDB Group has lent transaction-linked TA, that is, advisory services that support projects which are prime for investment. Nonetheless, there is also an emerging opportunity in moving those services towards the pre-investment phase, that is, supporting the generation of a pipeline of projects whose financial prime might be achieved via the provision of TA's that close knowledge, business, or financial gaps.

The CIRP will include an up to US$ 0.5 million TA Window under the management of IDB Lab and an up to US$ 2.5 million TA Window to be managed by IDB Invest Advisory Services.

In this context, IDB Group's TA window is expected to provide the following grants on a rolling basis (tailor-made solutions may also be accommodated as long as they remain compatible with CIRP's overarching targets), which can be categorized into Early-stage investments at IDB Lab and IDB Invest Advisory Services.

IDB Lab Early-stage investments (E4DF Assistance, see Annex 2 for more information):

- **Origination TAs**: consists of origination support for Climate related companies that fits the investment thesis for early stage, including climate specific online/offline events, webinars, etc.
- **Legal and Technical advisory TAs** to generate knowledge and value added for the portfolio companies.
- **Promotion of Investee Companies participation in Climate-Tech events and activities**
- **Monitoring capacity building during startups execution period.**
- **Impact Evaluation at the end of the ED4F Investment Period (6 years)**

IDB Invest Advisory Services:

- **Project Preparation TAs:** covers prefeasibility studies, feasibility studies, market readiness studies, business model generation and validation, technological de-risking assessments, and similar projects, which facilitate decision making for both project sponsors and investors regarding the techno-economic outlook of a particular opportunity. Examples: supporting the conceptual engineering of a green ammonia production facility, validation of the business model for an electric car leasing project, supporting first time green bond issuers in e.g. identifying the market potential, evaluating the feasibility and structuring.
- **Operational assistance TAs:** covers the provision of technical, corporate governance, E&S, and legal due diligence services. These would be lent to projects where the nature of the investment or the size of the transaction may demand high due diligence costs that may represent a barrier for investment to the sponsor. Examples: legal due diligence for renewable energy PPA's in a jurisdiction with a maturing regulatory framework for such opportunities.
- **Innovation in contractual models TAs:** supports the preparation of contractual and legal instruments that can facilitate business model or stakeholder articulation innovation, provided by specialized legal consultants that can frame such assistance in local jurisdiction. Examples: supporting a public-private scheme for an electric bus metropolitan project with overarching structuring services.
- **Gender, diversity and inclusion smart appraisal TAs:** supporting the promotion of gender, diversity and inclusion across EE, RE, and sustainable transport projects, across the asset lifetime. Specific results-based incentives on gender and inclusion KPIs may be linked to these TAs. Examples: performing a gender appraisal study on the construction and operation of a solar PV portfolio being considered for financing, quantifying the expected gender gap in construction and operation of the assets, coupled to training that promotes a diversified workforce.
- **Knowledge and dissemination TAs:** develop knowledge products (either client or market facing) that can help build the stakeholders involved and perform monitoring, evaluation, and dissemination activities for supported projects and investments. This is a cross-cutting TA category.

The use of grants in the CIRP will be limited to the Technical Assistance Window and will not exceed the amount of US$ 3.0 million in any case.

1.5.7. Allocation of CTF resources.

The CIRP will be funded with **US$ 29 million** from the CTF. These resources will be allocated following the table below:

Financing component	IDB Invest (US$ Million)	IDB / IDB Lab (US$ Million)	Total
Implementation and Supervision Budget[12]	0.8	0.2	1.0
Technical Assistance Window	2.5	0.5	3.0
IDB Lab Early-Stage Window	0.0	5.0	5.0
IDB Invest Scale-Up Window	20.0	0.0	20.0
Total	**23.3**	**5.7**	**29.0**

1.5.8. Innovative solutions across sectors: our approach to the use of concessional resources in Green Hydrogen in Latin America and the Caribbean

The proposed CTF contribution will be used to encourage the introduction of new technologies, business models and financial solutions across the CTF Futures Window sectors. While the Program will remain open to innovation through a flexible and adaptive approach for the next 3 years, there is an initial focus on green hydrogen as a clean technology with potential uses across the priority sectors of the CTF Futures Window.

LAC countries contributed to around 3.5 Mt or 4% of global hydrogen demand in 2020. 2.5 Mt (more than 70%) was consumed by industry sector, mainly in **refinery**, **ammonia**, **methanol production** and **steel making**[13].

In LAC, the vast majority of hydrogen production is based on natural gas through steam-methane reforming processes, and is concentrated in six countries. As of 2019, Argentina, Brazil, Chile, Colombia, Mexico and Trinidad and Tobago all together contribute 87% of the region's total hydrogen production. Trinidad and Tobago alone accounts for around 44%, or 1.8 Mt. Mexico and Brazil produced 700 thousand tonnes (Kt) and 400Kt respectively. Chile and Colombia together accounted for around 330 Kt. **86% is produced from natural gas 14% comes from other fossil fuels or by-products, and only 0.4% is from electrolysis**.[14]

[12] While the Program includes a US$ 1 million allocation to the Implementation and Supervision costs (see Annex 1 of this document), the US$ 5 million CTF investment in IDB Lab's E4DF entails a management fee inherent to the nature of an investment fund where the General Partner (in this case, IDB Lab) is entitled to a management fee defined as an annual percentage over the committed capital of the fund against the fund resources (as described in the Annex 2 of this document). The US$ 0.2 million allocated to IDB correspond to the fiduciary role activities related to the management of the Program.

[13] IEA, https://iea.blob.core.windows.net/assets/c5bc75b1-9e4d-460d-9056-6e8e626a11c4/GlobalHydrogenReview2022.pdf

[14] Ibid

The most common supply route in the region is captive or dedicated hydrogen production, in which in-situ production is coupled to an existing demand. There are also small volumes of merchant production. Nonetheless, interest in upscaling production of hydrogen via water electrolysis is increasing in the region, both to supply existing industrial uses of hydrogen and to serve as pilot demonstrates for upcoming applications.

Several industries across the region have installed mainly alkaline electrolysers for self-supply, while pilot projects in Argentina, Chile, Costa Rica, Colombia, Paraguay, and Peru are laying the foundation for emerging power-to-X applications. There are only four water electrolysis facilities across the region, including three low-carbon hydrogen pilot projects (in Argentina, Chile, and Costa Rica) and an industrial plant using grid electricity, in Peru.

Going forward, green hydrogen is expected to play an increasingly important role in multi-sector decarbonization, not only by replacing the existing applications of grey/brown hydrogen but also through expanding towards emerging applications such as zero-emission transport, industrial sector decarbonization, electricity storage, and power-to-chemicals. However, **not all the potential applications of hydrogen will be ready to be deployed in the 3-year timeframe of the CIRP**.

Since 2018, the IDB Group has been supporting the region in building capacity and setting favorable conditions for successful green hydrogen investments in the coming decades. Specifically, the IDB has helped several government agencies in **Chile**[15], **Colombia**[16], **Uruguay**[17] and **Costa Rica**[18], among other countries, build their national hydrogen promotion roadmaps and create favorable market conditions.

Chile was the first country in the region to publish a national green hydrogen strategy, which was launched in November 2020. Chile plans to scale up the electrolysis capacity to 5GW by 2025 and aims to produce hydrogen at a target price of less than $1.5/kg by 2030. By the end of 2025 (Wave I), Chile identifies six prioritized applications of green hydrogen, which are oil refineries, ammonia, mining haul trucks, heavy-duty trucking, long-range buses, and blending into gas grids. To support the implementation of the strategy, the Chilean Economic Development Agency (CORFO) has published a call for financial assistance for a total amount of $50million for the development of new Green Hydrogen Projects[19].

Colombia published its national hydrogen roadmap in September 2021. The roadmap projects that the internal demand for hydrogen in Colombia will reach thresholds of 1.6-1.8 Mt by 2050 and all can be met by the domestic supply from renewable sources. By 2030, the Levelized Cost of Hydrogen (LCOH) is estimated to be $1.7/kg. According to that roadmap, at least 1 GW of electrolysis capacity will be installed and at least 1,500 light fuel cell vehicles for passengers and cargo transportation will be adopted at that time. To materialize this target, US$ 2.5 billion will be invested.

Other countries such as Mexico, Brazil, Costa Rica, Peru, Argentina, Uruguay, Paraguay, and Trinidad and Tobago, are in the process of developing their hydrogen strategy. They have included hydrogen as a component of their national energy planning, decarbonization and transportation strategies, and are working on the regulatory framework and designing incentives for the hydrogen market to take off. This momentum is complemented by major private sector initiatives. For example, in April 2021 Peru's Hydrogen

[15] https://www.iadb.org/en/news/chile-speed-decarbonisation-and-energy-transition-idb-support

[16] https://blogs.iadb.org/energia/en/colombia-takes-position-in-the-green-hydrogen-industry-in-latin-america/

[17] https://blogs.iadb.org/energia/es/gran-impulso-al-hidrogeno-verde-en-uruguay/

[18] https://www.h2bulletin.com/costa-rica-crusa-idb-hydrogen/

[19] https://www.dentons.com/en/insights/articles/2021/may/10/call-to-develop-green-hydrogen-projects-in-chile

Association and ENGIE launched the country's first diagnostic on green hydrogen[20]. Recently Puebla State Energy Agency of Mexico released the industry strategy report named "Green Hydrogen in Mexico: the potential for transformation". In Colombia, the national green hydrogen association is working with its private sector members and the public sector to develop fiscal incentives and potentially establishing funds to support the de-risking of projects.

IDB Invest is working with private companies (both foreign multinationals present in the region and national and multinational companies in the region) to build technical and analytical capabilities, identify opportunities for early technology adoption, and develop **upstream technical assistance services and financial solutions** tailored to their hydrogen projects.

In 2022, IDB Invest and IFC supported the Renewstable Barbados project developed by Hydrogène de France (HDF) and Rubis, consisting in the installation of a 50MW PV plant with green hydrogen and lithium-ion battery storage that will provide reliable and clean electricity to the Barbadian grid. The institution is working with other power generation companies, gas transporters, and industrial and manufacturing facilities in the region to strengthen its green hydrogen project portfolio.

Among several challenges related to upscaling investments in green hydrogen, matching interests in investing in supply assets to a growing demand (offtake) remains critical. The question of supply and demand resonates with actors in the green hydrogen market; would-be suppliers are uncertain about a market for their outputs, and prospective consumers are uncertain about the availability of hydrogen to meet their needs.

The uncertainty in the supply and demand evolution arises from the significant entry barriers to the sector due to the relative high cost of production of green hydrogen relative to available technologies and the infrastructure needed for distributing hydrogen to a widespread demand, that faces constraints based on the physical characteristics of hydrogen in terms of density, liquefaction temperature or leakages. While today costs of production of green hydrogen would range around 3 to 4 US$/Kg in favorable locations, the competitive threshold for this technology sits in the range of 1 to 1.5 US$/Kg.

Shifting from brown and grey hydrogen towards green hydrogen in existing uses will remain the major opportunity in the short term. Green ammonia/fertilizers, methanol and industrial applications in the iron, steel, chemicals and cement sectors can benefit of the superior potential of renewable energy resources in LAC together with applications in isolated systems such as small islands as back-up storage.

Therefore, the following attributes are particularly important when evaluating the short-term opportunities of green hydrogen: **scaling up existing demands**, the capacity to produce **low-cost green hydrogen**, the **proximity to demand**, **investments on infrastructures**, and **support from policymakers as well as private sectors**. LAC countries with one or more of these attributes will likely see faster and more viable developments in certain green hydrogen applications in the short term. At the same time, these are the areas where blended finance resources could be used in a more efficient way, to ensure that decreasing subsidies are required to promote the viability of investments in green hydrogen applications to decarbonize hard-to-abate sectors of LAC's economy.

1.5.9. Initial Pipeline

IDBG is currently evaluating projects aligned with the Program's objective. Below we provide a high-level description indicative and non-exhaustive of some of these projects both at the Early-Stage Window and the Scale-up Window.

[20] https://h2.pe/tag/potencial-hidrogeno-verde-peru/

The IDB Lab early-stage Climate Innovation Window

1) **2-wheel electric mobility platform in Brazil.** One of the target investees of IDB Lab's E4DF is a Brazilian start-up conceived as an electric mobility platform for 2-wheel vehicles using a battery-swap model to accelerate the transition to electric mobility in LAC. The E4DF is considering a US$ 2 million direct equity investment in the Series A of the company.

2) **Smart Energy platform for SMEs in Colombia.** That potential investee is an energy retailer in Colombia promoting energy savings to their SME customer base by exploiting all the benefits that smart metering brings to that effect. That business model enhances transparency for the clients, empowers energy efficiency efforts and provides an amount Renewable Energy Certificates (RECs) equivalent to the consumption of the clients using blockchain technology. The E4DF is considering a US$ 2 million direct equity investment in the Series B of the company.

The IDB Invest Blended Finance Climate Innovation Scale Up Window

3) **Distributed solar plus storage for commercial and industrial clients in Haiti.** IDB Invest is assessing providing a mezzanine blended finance tranche to a company providing energy services to Haitian companies impacted by unreliability of the electricity grid in the country and the pronounced increase of fuel prices since the uplifting of fuel subsidies in the country which, in turn impacts the self-supply energy means mostly composed by diesel generators. The proposed solution combines the use of solar PV and batteries to maximize energy cost savings of the clients alongside with the penetration of renewables in the energy mix.

4) **Incorporation of electric buses in the renewal of a public transportation fleet in Mexico.** IDB Invest is approaching potential participants in a public tender for a bus fleet renewal with battery electric buses in one of the major cities in Mexico. The renewal of more than 100 buses could become one of first large-scale examples of this new technology in public transportation systems in Mexico. Following its recent experience in Colombia, IDB Invest is exploring solutions to crowd in other sources of commercial financing that may increase availability and allow a faster pace of efficient technology adoption. Risk mitigation solutions might be needed to properly mitigate such sector-specific/concession risks. In addition, IDB Invest is assessing including gender, diversity and inclusion incentives in the transportation sector both addressing women inclusion in labor force as well as a gender lens approach to the use of public transportation systems.

5) **Electric vehicle residual value risk insurance in Colombia.** IDB Invest is designing a blended finance solution to address the impact of residual values in leasing electric vehicle fleets for professional use (i.e. taxis, ride sharing, last-mile delivery). There is a gap in residual value forecasts of battery electric vehicles Vs internal combustion engine vehicles due to market inertia due to lack of track record and information asymmetry due to perceived risks of obsolescence of battery technology. This gap impacts the affordability of battery electric vehicles for professional use via leasing. The use of concessional funding in the form of a guarantee in respect of this gap can accelerate the deployment of that business model in that segment. This gap is expected to reduce over time so from a commercial sustainability perspective, using concessional funds to target this transitional risk could be justified. IDB Invest is willing to pilot that blended finance solution in the Colombian market.

1.5.10. Program Financing Plan

With the proposed **US$ 29 million CTF contribution,** IDBG will seek to mobilize investments of approximately **US$ 216 million,** which will indicatively be distributed as follows:

Source of funding	Financing component	Amount (US$ Million)	Amount (%)	Type of financial instrument
CTF	Implementation and Supervision Budget	1.0	0.5%	-
	Technical Assistance Window	3.0	1.4%	Grant
	IDB Lab Early-Stage Window	5.0	2.3%	Equity investment in E4DF
	IDB Invest Scale-Up Window	20.0	9.3%	Equity, Mezzanine, Debt, Guarantees,
IDBG	Co-investment	42.0	19.4%	Equity (including IDB Lab co-investments in E4DF investee companies), Mezzanine, Guarantees, Debt instruments
External resources	Private sector mobilization	100.0	46.3%	Equity, Mezzanine, Guarantees, Debt instruments
	Public sector co-investment in E4DF	40.0	18.5%	Equity investment in E4DF
	Other sources of concessional finance	5.0	2.3%	Equity, Mezzanine, Guarantees, Debt instruments
Total Financing		**216.0**	**100.0%**	

1.5.11. Summary of proposed CTF Terms

Financing instruments to be considered include equity, subordinated debt/loan /mezzanine instrument with convertible features, guarantees, loans and grants for technical assistance. Below are basic terms proposed for implementation of each of these CTF instruments under the CIRP.

If structured as **equity**:[21]

Use of CTF Proceeds	CTF resources could be used as Equity to co-invest with IDBG capital directly or via the E4DF in target companies. As such, equity investments could be done through equity funds or directly in companies, trusts or entities of a similar nature, either public or private.
Shareholding proportion	CTF participation will not exceed 30% of the shareholding interest in the company/project.

[21] See full Term Sheet of the E4DF in Annex 2.

Seniority	CTF shares will rank at least pari passu in all respects with all ordinary shares but could be junior to other/preferred shares.
Return	Target return, structure of payout and exit scenarios will be determined based on the needs of each project and negotiations with each client. CTF returns could be capped at a certain level, to enhance return profile and crowd in other investors. In all cases the concept of minimum concessionality will be applied. Similarly, CTF shares may include a transfer mechanism to provide incentives to investees management to achieve certain climate or gender, diversity and inclusion goals.
Exit	Exit strategies and targets will be determined on a case-by-case basis, but in all cases, exits will be effected along with the IDBG's equity investment. Exits will typically be targeted for periods within 10-12 years from the date of investment. However, regardless of the exit target and strategy to be pursued in each project, timing of the actual exit from investment position cannot be guaranteed and will be determined over the course of project supervision.
Investor Rights	Investor rights (related to e.g. governance, exit options, purchase of additional shares) will be negotiated on a case-by-case basis. This will include rights awarded to CTF/IDBG as minority investors as well as rights of majority shareholders relevant to the CTF/IDBG investment.

If structured as **subordinated debt/loan /mezzanine instrument with convertible features**:

Use of CTF Proceeds	The CTF could be used as a mezzanine financing instruments when either the seniority, pricing/compensation, and/or other terms required by the projects/companies considered under the CIRP fall in between, and combine features of, conventional pure equity and fixed-rate, senior debt financing. Mezzanine instruments could include, among other, subordinated debt, , convertible debt , and other quasi-equity products.
Tenor	No more than 20 years. Tenor will be defined on a case-by-case basis, according to the economic profile of each investment.
Seniority	Will normally be senior to ordinary shares and subordinated to senior lenders. May rank pari passu with either of them depending on specific needs of each project.
Pricing	Mezzanine debt products will generally be priced with a floor interest rate of at least 200 basis points fixed plus -when relevant- a variable component (e.g. with income participation features). Quasi-equity products will instead mainly have variable returns but could also incorporate a fixed component. Actual compensation structure and pricing will be determined based on the needs of each project and negotiations with each client. In all cases the principle of minimum concessionality will be applied.

If structured as **guarantees**:

Use of CTF Proceeds	CTF funds could be used as guarantees issued to enhance the credit profile and economic viability of transactions
Beneficiary	Any lenders and investors participating in the CIRP (including IDBG)
Tenor	Tenor will be defined on a case-by-case basis, according to the economic profile of each transaction, but will not exceed 20 years. A grace period can be determined on a case-by-case basis
Seniority	Junior or pari-passu with IDBG debt or guarantee product, and normally senior to equity investors.
Pricing	Pricing for the guarantee will most typically range between 50 and 200 bps per annum, with 50 bps set as the minimum floor pricing under this Program. The principle of minimal concessionality will be applied.
Call of the Guarantee	In the event of non-payment to a guarantee beneficiary (or other event that would contractually trigger a payment of the guarantee, e.g. project underperformance when the guarantee covers performance risk), IDBG shall process a guarantee payment from CIRP resources for the amount contractually required, up to the maximum amount covered by the guarantee for the respective beneficiary. IDBG is authorized to complete the processing of a guarantee payment from CIRP resources within 5 business days upon occurrence of the guaranteed event. Guarantee payments shall be subject to IDBG's applicable internal controls, which shall document evidence occurrence of a guaranteed event.

If Structured as **Senior Debt**:

Use of CTF Proceeds	The CTF may provide senior debt co-financing with IDBG loans
Beneficiary	Project Sponsors or Financial Institutions
Tenor	Up to 20 years. Tenor will be defined on a case-by-case basis, according to the economic profile of each investment.
Seniority	CTF Loan would be senior in priority of payment and any other respects in case of default on the loans
Pricing	CTF senior debt will be priced with a floor interest rate of 100 basis points fixed. Actual pricing will be determined based on the needs of each project and negotiations with each client. In all cases the concept of minimum concessionality will be applied

Fees. For all instruments listed above, fees to be charged on behalf of the CTF will be consistent with the IDBG's fee structure.

2. Fit with CTF Futures Window Investment Criteria

2.1. Potential for transformational change

2.1.1. Relevance

In a transformational change framework, relevance is the "alignment with context and opportunities to advance transformational change goals"[22]. The design of the CTF Futures Window within the framework of the DPSP III in combination with the adequate governance of blended finance investments is conducive to the development of demand-driven versatile programs. Within that context, risk, innovation and ambition are inherent to transformational change objectives.

The CIRP has been designed to embrace risk, innovation and ambition through a wide geographical scope, an array of diverse financial instruments and a flexible sectoral scope. In that section we will describe how the design of the Program facilitates transformational change using a theoretical example of the development of Green Hydrogen in LAC within the timeframe of the Program (3 years).

Example. Promoting Green Hydrogen in LAC

IDB Invest is presented with two different market opportunities in the green hydrogen sector. The first one is green hydrogen integrated in a green fertilizer plant in Brazil. The second one is green hydrogen as a fuel for a taxi fleet in Colombia.

Both countries are eligible for the CIRP. Both applications of this technology are also eligible. However, by applying the principle of Commercial Sustainability and section 1.5.8 of this document, those investments displacing existing uses of hydrogen, with access to a low-cost renewable source of energy and with proximity to demand are to be prioritized. Therefore, in that scenario, IDB Invest would prioritize the use of green hydrogen in the industry of fertilizers rather than in passenger transportation, where other clean technologies would be more competitive within the timeframe of the Program.

2.1.2. Systemic change

In a transformational change framework, systemic change is the "fundamental shifts in system structures and functions".[23] Systemic changes involve shifting the structures, functions, and interrelationships of the elements within the systems that produce or shape the outputs and outcomes relevant to climate action. Systemic changes provide the enabling conditions for transformations in key economic, social, governance, and technological systems by removing entrenched barriers, opening new opportunities or pathways, and shifting power dynamics.

The TA Window of the CIRP is designed to support systemic change by providing enabling conditions for investment in climate innovation. In private sector projects, TA supports knowledge generation, advisory, and capacity building to facilitate investment in high-impact projects and enterprises. TA is crucial to compensate uncertainty, increased risk, or higher upfront costs associated with investments in innovative and clean technologies, and to ensure the resilience of investments. Furthermore, TA is often instrumental in originating investment opportunities, facilitating the investment decision, reducing risk and uncertainty

[22] Climate Investment Funds. "Transformational Change Concepts", https://www.cif.org/sites/cif_enc/files/knowledge-documents/tc_concepts_brief.pdf

[23] Ibid

in projects related to disruptive technologies, and facilitating leapfrogging for emerging markets via knowledge transfer and best practice adoption from developed markets.

Example. Promoting Green Hydrogen in LAC

Once the most promising applications for green hydrogen in LAC based on the principle of Commercial Sustainability are identified, there would still be certain barriers to tackle in the origination phase of bankable transactions in that space.

Following our example of the application for green fertilizers in Brazil, upstream advisory services would become conducive to sustainable investment by providing TA to the project sponsors in order to support viability gap analysis to inform the technological risks involved in the process of converting renewable energy to green hydrogen via electrolysis, green hydrogen to green ammonia and green ammonia to the end product. These technological risks would in turn inform the structure of a blended finance solution to de-risk that investment. The viability gap analysis would also assess the bankability of the offtake contracts for green fertilizer to assess the sustainability of the investment. Finally, TA would also be supportive of a life-cycle assessment of the impacts that this new technology would be delivering in comparison to the current state of the art in the fertilizing industry.

2.1.3. Speed

In a transformational change framework, speed means "accelerate or decelerate impacts to achieve the appropriate speed of change"[24]. The importance of speed should not be construed as a call to rush the implementation of interventions that may take time to achieve outcomes or require specific timings to capture the windows of opportunity.

While the high ambition for rapid change can be compelling and useful, the depth and sustainability of changes require time in order for sufficient systemic changes and/or scaling to occur and set in so that they are not fleeting or superficial.

The CIRP has been designed following the CTF Futures Window framework and the CIF Pipeline Management and Cancellation Policy. Therefore, absent any extension, the time constraint of the Program to approve sub-projects is 3 years. In that context, the demand-driven approach embedded in the design of the CIRP is of the essence to identify those interventions that are "coming to speed" rather than create overly prescriptive programs that could fail to deliver expected results in a limited timeframe if the hypothesis under which they were created do not materialize over time.

Example. Promoting Green Hydrogen in LAC

Under a demand-driven approach, opportunities would arise in IDB Lab or IDB Invest pipeline at a certain stage. Upon appraisal of the potential investments of the CIRP, the array of financial instruments available under the Program would become a necessary tool to maintain or accelerate the speed of change under a specific technology or business model.

Back to our example, if the green fertilizer project were to be presented during the development phase, a combination of TA support and equity co-investment in the project company to support the transition of the project towards the procurement and construction stage could be the most appropriate strategy. If that same project were to be presented in a "ready-to-build" shape, then a debt instrument, probably with subordination features to absorb technology risks, would be the most meaningful solution to maintain the traction of the intervention and promote transformational change within the boundaries of the Program.

[24] Ibid

2.1.4. Scale

In a transformational change framework, scale means "contextually large transformational change processes and impacts".[25] In some cases, scale expansion begins small or local—at the individual, household, organizational/institutional, community, or sub-sector levels—and builds up and out over time, as the decisions, actions, or adoption of practices or technologies diffuse. In other cases, scale may start at higher levels and have impacts at other levels, such as through large-scale nationally determined contributions and investments in change, which cascade down to the lower levels.

The CIRP is founded on the idea to provide solutions across the *continuum* of a project life cycle. Thus, the integration of a TA Window, an Early-Stage Window and a Scale-Up Window is predicated on the idea of "meeting the projects where they are" and provide the necessary tools to build up and out over time.

The companies invested by the E4DF at their early-stage will become natural candidates for scale-up through the Program if potential for growth is identified within the timeframe of the Program. However, scale, as well as mobilization, should be also signaled when investments in technologies and business models supported by the CIRP develop themselves beyond the boundaries of the Program with decreasing subsidies to achieve commercial sustainability.

Example. Promoting Green Hydrogen in LAC

Following our green fertilizer investment in Brazil we could identify a larger transformational change when other participants in the market would enter the Brazilian green fertilizer supply industry attracted by the size of the existing demand for fertilizers, the quality of the renewable energy resource in certain areas of the country and the vicinity to a cluster of big consumers.

A certain causality between the knowledge spillovers of the pioneering investment in the green fertilizer sector could be attributed to the use of blended finance combined with TA in that first transaction hypothetically supported by the CIRP.

Those additional investments would most likely occur beyond the timeframe of the Program and would likely require decreasing amounts of subsidies to become viable if transformational change is manifested.

2.1.5. Adaptive sustainability

In a transformational change framework adaptive sustainability means "robustness, resilience, and adaptiveness of change".[26] Adaptive sustainability recognizes the importance for people, systems, and change processes to have the capacity to be responsive to changing circumstances and evolving needs over time.

At the Program level, adaptive sustainability is embedded at the core of the CIRP via a demand-driven approach designed to be responsive to the evolution of LAC's private sector pipeline of climate investments. At the transaction and the portfolio level, risk diversification can play a relevant role to promote adaptive sustainability.

Example. Promoting Green Hydrogen in LAC

Our green fertilizer plant would generate green hydrogen and green ammonia as intermediate products in the process of fabrication of ammonium nitrate. However, those intermediate products may have an alternative function in the market if other applications of green hydrogen such as, for example, back-up

[25] Ibid

[26] Ibid

storage or other applications of green ammonia such as, for example, fuel for transportation were to be identified as more profitable for the company.

At that transaction level, designing for a better response to changing circumstances of the market would become a relevant instrument to promote adaptive sustainability.

2.2. Potential GHG Emissions Savings

At this stage, the exact portfolio composition of the CIRP cannot be defined. For the performance indicators target calculations, the IDBG is using a set of projects currently under portfolio in the selected sectors and within the eligible countries. The Program will support projects expected to reduce GHG emissions by an estimated **3.5 million tCO_2e over 20 years**. The IDBG will document the GHG reductions.

2.3. Potential to significantly contribute to the principles of just transition

A low carbon transition would have widespread ramifications for all relevant sectors—but there will be winners and losers. Alongside ensuring equitable access to employment opportunities created by the push for carbon neutrality, a just transition would help to ease energy poverty in LAC, which is still acute in small nations such as Nicaragua and Guyana and some Caribbean nation.[27]

By some estimates, decarbonizing LAC's economy could save the region billions of dollars. However, such gains do not imply benefits for all: Hydrocarbon-dependent countries would suffer from lost rents in a net-zero scenario. With these considerations in mind, IDB Invest will focus on facilitating a just transition that creates jobs and seeks to retrain those adversely affected by the climate economy. Additionally, the physical impact of climate change will have adverse effects on labor conditions and subsequent productivity. Joint research from the IDB and the International Labor Organization (ILO) suggests that LAC working hours will be so constrained by adverse heat and temperatures that the equivalent of 2.5 million jobs will be lost in the region.[28]

Transition risks are highest for high-carbon labor markets, but overall employment growth is possible. In a decarbonization scenario, the number of jobs in carbon intensive sectors such as fossil fuel extraction, power generation, and certain types of livestock farming will decline. Yet job opportunities in low-carbon sectors such as renewable electricity, forestry, and climate-smart agriculture will increase substantially, likely resulting in an employment increase of between 15 million to 22 million people compared to a business as usual, hydrocarbon economy.[29] These trends are essential to understanding how investment strategy and client advisory can work in tandem with these structural changes playing out in transition scenarios.

IDB Invest can target key areas to drive social benefits in a low-carbon economy. While new training programs can be facilitated by the public side of the IDB Group, IDB Invest can target key areas of

[27] Thomson et al., "Understanding, recognizing, and sharing energy poverty knowledge and gaps in Latin America and the Caribbean." Energy Research & Social Science, May, 2022. https://www.sciencedirect.com/science/article/pii/S2214629621005624#bb0070

[28] Saget et al. "Jobs in a net-zero emissions future in Latin America and the Caribbean." International Labour Organization and Inter-American Development Bank, July 2020. https://publications.iadb.org/en/jobs-in-a-net-zero-emissions-future-in-latin-america-and-the-caribbean

[29] Ibid

sustainable supply chains to help mitigate shocks in labor markets caused by the energy transition and circular economy.

The CIRP has been designed to combine climate, gender, and sustainability smart grants with IDB Invest's and IDB Lab's TA Windows, where the latter are instrumental to contributing to building a pipeline of projects fully supportive of achieving a just transition in the relevant jurisdictions.

The TA Window has been designed to combine several sustainability-driven targets for projects (mitigation, adaptation, sustainable value chains, circular economy, etc) with a gender smart approach, which accounts for significant potential to contribute to transitioning to economies and services that simultaneously reduce the gender and inclusion gap while promoting investment in the green agenda.

2.4. Financial effectiveness

2.4.1. Value for Money

Given the direct GHG mitigation potential mentioned above, the cost effectiveness of CTF investments would be **~0.12 tCO_2e/US$,** or **US$ 8.3/tCO_2e** (this estimate corresponds to Program lifetime abatement of 3.5 million tCO_2e and a total of US$ 29 million of CTF resources).

Assuming the target financial leverage defined in the proposal of CTF resources (i.e. CTF providing ~13% of the total investment resources needed) the total cost effectiveness considering other sources beyond CTF would be around US$ 61.7/tCO_2e.

2.4.2. Mobilization potential

In aggregate, the US$ 28 million investment contribution from the CTF[30] is expected to mobilize **US$ 42 million** from IDB Group own capital (~1:2 ratio), US$ 100 million from the private sector, US$ 40 million from public funding in the E4DF and US$ 5 million from other sources of concessional funding for an aggregate mobilization of **US$ 187 million** (~1:6.7 ratio).

2.5. Implementation potential

This Program will be implemented immediately upon its approval by the CTF Trust Fund Committee with the expected approval of the first sub-project under the CIRP during 2023.

IDB Invest's experience with the i3-0 Programs shows that diversification in terms of sector, instruments and geographies ended up allowing to extend concessional resources under a demand-driven approach. IDB Invest has already approved **US$ 54.6 million** in **11 transactions**[31] out of the US$ 61.0 million available through these programs until February 2023. That provisional **89%** deployment rate in DPSP III programs compares to an historic **56%** in the portfolio of CIF programs managed by IDB Invest since its inception. These investments have already mobilized **US$ 110 million** from IDB Invest own capital (1:2 ratio) and **US$ 290 million** from private sector investment (1:5 ratio), for a combined investment amount of **US$ 470 million** (1:8 ratio).

The initial pipeline described in section 1.5.9 above reflects engagements of the IDBG with a thematic and regional fit with the CIRP. While certain "mortality rate" of this pipeline is to be expected, at least one

[30] Including **US$ 3.0 million** as grants for technical assistance

[31] Out of them, **10** transactions have already reached financial closing for a total amount of **US$ 49.6 million** and a deployment rate of **81.3%.**

approval of a first sub-project is expected to occur in the short term. However, experience with the i3-0 Programs informs that while the Phase I of the i3-0 was approved in July 2018, the first sub-project was approved in March 2020 and, from there, 11 sub-projects were approved using i3-0 resources through December 2021.

2.6. Gender equality and inclusion impact

2.6.1. Gender analysis

While efforts to address gender equality issues in LAC have been increasing, significant systemic barriers persist. Throughout the region, countries have taken steps to narrow gender gaps in primary education, women's life expectancy, and labor force participation[32]. However, LAC still faces difficulties in addressing disparities related to women's ownership of assets, access to sexual and reproductive health services, affordable childcare, and opportunities in higher-paying sectors[33].

Globally, LAC ranks as the second-highest region with a finance gap, with only 49% of women having access to a bank account and a mere 10% having access to credit[34]. Additionally, only one-third of Micro, Small, and Medium-sized Enterprises (MSMEs) are owned or led by women, resulting in an associated finance gap of $98 billion[35]. Moreover, women in the region are more likely to live in poverty, with 112.7 women residing in impoverished households for every 100 men[36].

Despite an increase in female labor force participation in the region, gender imbalances persist in job access, with women typically gaining entry to lower-skilled, lower-paying positions**. Only 36% of women pursue careers in STEM fields, and less than 15% of new jobs in the construction and transport sectors are filled by women**[37]. Additionally, in the construction sector, the proportion of formally contracted female workers ranges from a mere 1% to 6%[38].

A range of pervasive and closely interconnected **market failures** continually exacerbate gender inequalities throughout the LAC region. These systemic and structural biases and inequalities are embedded within economic systems, resulting in unequal outcomes for women and girls. These failures happen when market mechanisms do not sufficiently recognize and confront the distinct challenges and discrimination individuals encounter due to their gender.

Research has shown that gender-diverse teams tend to be more creative, resilient, and effective in problem-solving, leading to enhanced innovation and improved decision-making[39]. And, although research shows that **startups founded or co-founded by women, on average, report 19% higher revenue per dollar**

[32] World Bank, CLOSING GENDER GAPS IN LATIN AMERICA AND THE CARIBBEAN, 2020

[33] World Bank, CLOSING GENDER GAPS IN LATIN AMERICA AND THE CARIBBEAN, 2020

[34] Gender Equality Observatory for Latin American and the Caribbean, Femininity index of poor households, 2019

[35] IDB, The Gig Economy and Financial Inclusion of Women in Latin America, 2023

[36] Gender Equality Observatory for Latin American and the Caribbean, Femininity index of poor households, 2019

[37] IDB, Towards a Fair, Inclusive Transition: Employing Women in Infrastructure Projects, 2022

[38] IDB Invest, Making Women Welcome: the Next Challenge for Renewable Energy Construction Projects, 2022

[39] The importance of diversity and inclusion in the startup ecosystem. (n.d.). https://venturebaylabs.com/the-importance-of-diversity-and-inclusion-in-the-startup-ecosystem/

invested compared to male-founded startups, women entrepreneurs still face numerous hurdles, including limited access to capital, gender bias, and lack of supportive networks**.**

Female founders received only 2.3% of global venture capital funding in 2020[40], highlighting the stark gender disparity in investment allocation. This underrepresentation of women in the startup landscape not only deprives businesses of diverse perspectives and expertise but also hinders the growth of the entire entrepreneurial ecosystem. Furthermore, companies with diverse leadership were 21% more likely to experience above-average profitability. But when looking at LAC founding teams, they tend to be founded or hired from similar backgrounds (cultural and professional), and most LAC innovation comes from just 5 countries Brazil, Argentina, Chile, Colombia and Mexico.

The energy sector in Latin America, one of the project's main focus, unveils a stark imbalance that necessitates targeted interventions. Women's representation in the sector remains disproportionately low, both in employment and leadership roles[41]. This imbalance is particularly pronounced in the green energy subsector, where innovative solutions for climate change mitigation are incubated.

A traditionally male-dominated energy sector continues to perpetuate gender disparities. A study by the IEA[42] highlights that there are on average 76% fewer women working in the energy sector than men, and globally, women make up only 15% of senior management in publicly listed energy firms. This not only limits the sector's potential for innovation but also excludes diverse perspectives, crucial for addressing the multifaceted challenges of sustainable energy transition.

2.6.2. Gender Activities

The CIRP will contribute to improve the equitable access to private sector opportunities in low-carbon and resilient economies by increasing the capacity of the private sector to design and implement concrete and effective action plans to facilitate access to opportunities and **climate change solutions that are inclusive of any gender or diverse background**.

Given the nature of the CIRP as a **private sector program** with an unknown portfolio of subprojects or investee companies under the E4DF, the program will not define a single type of intervention but will draw from experience as highlighted in Box 1, with a successful example of capacity building and inclusive workforce development in STEM .

In the context of the IDB Lab Early Stage Climate Innovation Window, IDB Lab will actively coordinate with existing initiatives, such as WeXchange (the largest network of women founders in Latin America and the Caribbean) as well as activities financed by Women Entrepreneurship Finance Initiatives (We-Fi), for pipeline generation of companies with women in their executive management. **IDB Lab will support the inclusion of gender equity policies in the investments done with the E4DF**.

Additionally, the Program will focus on expanding knowledge on evidence-based market solutions for inclusive ecosystems, as well as on best practices on how to translate corporate commitments into concrete results that improve gender equality, diversity and inclusion in the workplace and in the markets they serve.

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[40] Teare, G., & Teare, G. (2020). Global VC Funding To Female Founders Dropped Dramatically This Year. Crunchbase News. https://news.crunchbase.com/venture/global-vc-funding-to-female-founders/

[41] Global Gender Gap Report 2023. (n.d.). World Economic Forum. https://www.weforum.org/reports/global-gender-gap-report-2023/in-full/gender-gaps-in-the-workforce/

[42] Making the energy transition just, equal and possible | Gender and Energy Compact. (n.d.). https://genderenergycompact.org/making-the-energy-transition-just-equal-and-possible/

To achieve these outcomes, the Program is expected to support private sector companies in LAC in the **design and implementation of action plans for inclusion** across (i) their products and service offering, including improved financing and more adequate financial products for women owned or women-led companies when dealing with financial intermediaries, and (ii) their human resources and procurement processes, including the creation of gender sensitive policies, creating internship programs in STEM targeting specific populations, segmenting portfolios with a particular inclusion lens.

IDBG will leverage on its expertise in the inclusion of **gender and inclusion performance-based incentives** where reductions in the interest rates are progressively introduced according to a predefined set of gender-related activities contractually agreed with project sponsors (see Box 1 below). Gender risks during the construction and operation phases will be assessed in relevant projects and managed accordingly. A gender-responsive monitoring and evaluation system will include the use of gender-disaggregated indicators when possible.

The Program is also expected to contribute with technical advisory for the client readiness assessments, diagnosis, design and implementation of gender, diversity and inclusion mainstreaming action plans and activities, meeting companies where they are, identifying their gaps and targeting the most effective actions they can take to bridge them.

2.6.3. Gender Indicators

Based on the context provided above, the CIRP will strive to incentivize the adoption of gender, diversity and inclusion activities through the combination of grants deployed through technical assistance and capacity building and the use of blended finance instruments such as performance-based incentives.

While is difficult to anticipate the potential outcomes generated through a not yet defined portfolio of subprojects or investee companies, the Program will strive to comply with at least the following targets:

a) number of **women trained in STEM** – with increased employment opportunities.
b) number of companies (subproject sponsors / investee companies under ED4F) adopting **gender, diversity and inclusion plans** (with gender-responsive workplace policies, improved HR and procurement policies, training on gender equality, sexual education and gender awareness).

Box 1. Promoting the gender, diversity, and inclusion agenda in Brazil: New Juazeiro Solar

New Juazeiro Bifacial Solar Power Project (Brazil) was approved and closed in 2020 and includes a **US$ 7.5 million** senior loan from the CTF. The transaction is the first US$ linked Power Purchase Agreement ("PPA") in Brazil financed by international lenders in a project finance modality with a non-conventional technology as it is bi-facial solar photovoltaic.

The transaction includes a set of performance-based incentives provided by both the CTF and the C2F2 tranche ensuring that considerations of gender and diversity are addressed, creating opportunities for women and afro-descendant Brazilians to participate in the labor force therefore strengthening human capital going forward.

At the **corporate level**, IDB Invest and Atlas Renewable Energy (the "Sponsor") agreed to conduct a public workshop with the EPC Contractor on how to be more inclusive in construction projects, using the example and learnings from the project, involving at least 8 different and relevant companies considered to be peers/stakeholders in the Sponsor's industry. In addition, the Sponsor has created a comprehensive best practices diversity and inclusion manual as a which shall be made public and aim at helping the whole industry to be more inclusive in terms of diversity.

In regards of **capacity building and workforce development at the project level**, the Sponsor has created and fully implemented an outreach campaign dedicated to women in science, technology, engineering, and mathematics (STEM) careers across at least 4 educational institutions (high-school, technical schools) and/or universities. The Sponsor has also created, documented, and started to implement an action plan on ways women working in the Projects and in the Projects' surrounding areas can pursue economic opportunities after the Projects are completed, which shall have specific focus on entrepreneurship and opportunities in fields of operation (engineering, technology, others).

The Sponsor has demonstrated that it has included women and afro descendants in the Projects' construction workforce in the following minimum ratios across all different phases of the Projects: (i) at least **10%** of the workforce hired for the construction of the Projects shall be women; (ii) at least **50%** of such positions (**5%** of the total workforce) shall be women of color; and (iii) at least **30%** of the remaining **90%** of the total workforce (i.e. **27%** of the total workforce) shall be men of color

In the second half of 2021, the project was awarded as ESG Energy Deal of the Year, Americas by IJ Global. In June 2023, the transaction was spotlighted in the context of the CIF's Trust Fund Committee meetings in Brazilia.

2.7. Development Impact potential

The key performance indicators of the Program have been described in previous sections of that document and are summarized in the table below:

Key Performance Indicators		**Target**
Avoided GHG emissions	Annual (tCO_2e/year)	175,000
	Lifetime (cumulative, million tCO_2e)	3.5
Increased supply of renewable energy	Installed capacity (MW) as a result of CTF interventions	76
Increased energy efficiency	Energy savings as a result of CTF interventions (GWh/year)	17.2
Increased finance for low carbon development mobilized	Volume of direct finance leveraged through CTF funding	US$ 187 million
	Cost to CTF (US$/$tCO_2$)	8.3
	CTF financial leverage	~1:6.7
Number of additional passengers using low-carbon transport per day		28,000 (52.6% woman[43])
Number of technologies/applications demonstrated		3

[43] Based on ridership of Transmilenio in Bogota, and included in the synthetic portfolio established for the purposes of the creation of development impact indicators

Number of women trained in STEM – with increased employment opportunities	100
Number of companies adopting gender, diversity and inclusion plans	3

This Program has also a significant number of potential development co-benefits. Many of these are expected to have immediate direct impact and all are expected to become significant as the demonstration effect of the CIRP impacts in a scale larger than that of the directly supported investments. Expected co-benefits are:

- **Energy stability:** Energy efficiency and self-supply RE projects provide greater stability to industrial clients whose operations rely on consistent flow of energy to maintain productivity. This is especially pronounced in countries with weak grids, unsound utility companies, unpredictable prices and electricity rationing. This high level of instability creates productivity losses and worsens the business climate for the important manufacturing industry which relies on high levels of energy consumption. In addition, energy efficiency and self-supply RE projects reduce demand on the unstable electrical grid which benefits the general public as well.
- **Energy security:** Despite a large share of hydroelectricity, more than 60 percent of total primary energy supply in LAC is based on fossil fuels. In many countries the energy matrix is increasingly vulnerable to price or supply shocks due to heavy reliance on imported fossil fuels. In addition, higher power supply costs result in reduced competitiveness of industry (and particularly in energy intensive, commodity producing sectors where cost increases cannot always be proportionally transferred to prices). Energy security concerns are heightened by the fact that two base-load technologies (large hydro and coal) have been facing significant environmental, economic, and social barriers for further development in the region.
- **Adaptation to climate change.** Many countries in LAC have significant hydro-based generation, and are therefore vulnerable to changing hydrological profiles, aggravated by climate change. Some of the projects will contribute to reduce this vulnerability.
- **Reduction of air pollutants from transportation:** Air pollution emitted from transportation has negative impacts on the health and welfare of the population. Pollutants that contribute to poor air quality include particulate matter (PM), nitrogen oxides (NOx), and volatile organic compounds (VOCs). The transition to a zero-emission transport technology reduces not only GHG emissions, but also local air pollutants that impact in the environment and the health and quality of life or urban inhabitants.
- **Knowledge spill-over effects:** By accelerating the development of this sectors in several countries in the region, it is expected that the development of the sectors in other countries will also receive a boost due to the regional nature of the IDBG and the regional scope of the Program.
- **Job creation:** Companies who will benefit from the project due to the lower long-term energy costs, increased energy security and enhanced competitiveness, which should normally contribute to continuous and increased employment. As well, engagement of local labor in the installation, operation and maintenance of the type of projects supported by the CIRP will positively affect the local community.

2.8. Demonstration potential at scale

The intentional demand-driven approach of the Program is a precondition for a strategic use of blended finance oriented to creating **knowledge spillovers** that can affect markets' behaviors and **fixing weak links in complementary production networks**.

These two strategies are derived from Paddy Carter's Economics of Development Finance where they are presented as the primary ways in which private investment can generate outsized social returns by catalyzing sustainable economic growth. Both seek to achieve productivity spillovers, by either tangible or intangible means.

The Program will seek to identify investments with the likelihood of generating large positive externalities in areas where the risk-adjusted financial returns are not currently commercially appealing to support investments with a good chance of leading to systemic change.

By supporting early-movers in untested clean technologies or business models to deploy tested clean technologies in LAC, the Program is willing to contribute to sustainable economic growth beyond the boundaries of each intervention. The combination of an early-stage window through IDB Lab and a scale-up window through IDB Invest is envisioned to support first-movers with a potential to generate social value beyond their own profit and loss statement.

In that context, and to ensure knowledge spillovers arising from blended finance interventions, combining the TA Window resources with the blended finance interventions is critical to validate a project's performance, technological and business outlook, and associated risks, resulting in increased appetite for future similar investments.

2.9. Cost-effectiveness

Given the direct GHG mitigation potential mentioned above, the cost effectiveness of CTF investments would be **~0.12 tCO_2e/US$,** or **US$ 8.3/tCO_2e** (this estimate corresponds to Program lifetime abatement of 3.5 million tCO_2e and a total of US$ 29 million of CTF resources).

Assuming the target financial leverage defined in the proposal of CTF resources (i.e. CTF providing ~13% of the total investment resources needed) the total cost effectiveness considering other sources beyond CTF would be around US$ 61.7/tCO_2e.

2.10. Additional costs and risk premium

The CIRP is designed to allocate a relevant share of the resources (indicatively US$ 10 million) to equity investments in both early and growth stages in untested technologies and business models, bearing a significant higher risk than other investments in relatively more mature sectors or technologies.

The uncertain outcome of an investment may affect financiers and entrepreneurs risk perception, slowing down or preventing it from occurring. Sometimes first-mover advantages may outweigh that risk, so private markets do create pioneering firms, but there would be more pioneers if they were financially rewarded for the social value of the knowledge they create. Concessional capital is set to play that role signaling the opportunities and making it more attractive for other commercial investors to invest, if there are real or perceived risks that they are not willing to take. It is to be acknowledged that such a strategy comes with a higher risk for the Program that is to be mitigated by a certain diversification strategy (see Annex 2 for more details on the E4DF) and a portfolio approach.

While the Program includes a US$ 1 million allocation to the Implementation and Supervision costs (see Annex 1 of this document), the US$ 5 million CTF investment in IDB Lab's E4DF entails a management

fee inherent to the nature of an investment fund where the General Partner (in this case, IDB Lab) is entitled to a management fee defined as an annual percentage over the committed capital of the fund against the fund resources (as described in the Annex 2 of this document).

2.11. Additional CTF investment criteria for private sector projects/ programs

2.11.1. Financial Sustainability

The CIRP's financial sustainability is inherent in the economic viability of identified eligible blended finance investments and the demonstration that these projects will offer, which will reduce perceived risks (and therefore the need for concessional support such as this CTF Program), as well as financing costs in the market for future projects. Furthermore, the Program's efforts will involve local financial institutions, companies, and developers through co-financing, technical cooperation and training, and the dissemination of case studies profiling the projects supported.

2.11.2. Effective utilization of concessional finance

The IDBG subscribes to the DFIs' Principles on Blended Concessional Finance for Private Sector Projects[44] (the "Blended Finance Principles"). This common framework seeks to ensure a harmonized, efficient and catalytic use of concessional resources in private sector projects, while avoiding market distortions and crowding out the private sector.

Concessional finance will comprise financial products, including loans, guarantees, and equity investments, provided on terms that are more favorable than those available are from the market, including:

- **Pricing**: Concessionality can be achieved through expected returns below those available on the market (i.e. lower interest rate for a loan), as determined upfront, or periodically for achieved and verified results (i.e. gender performance-based interest).
- **Terms:** Other aspects of structure may also make a financing concessional. For example, unless it is reflected in the pricing, lower seniority, longer tenor, back-weighted repayment profile, credit enhancements, or a weaker security package of a transaction would be considered concessional if commercial financial institutions would normally not accept it for a client in a particular market environment.
- **Liquidity**: Finally, finance provided where there is otherwise no access to market is implicitly concessional, even when its expected risk adjusted returns are aligned with market's expectations (i.e. priced at "market")

The IDBG has established a set of guidelines to implement the 5 principles that will be followed in the structuring of Blended Finance Transactions by a dedicated Blended Finance Team in charge of the CTF participation in each transaction.

Additionality

- The IDBG will use blended finance only when there is a relevant case that projects cannot be structured on a commercial basis and without the presence of CTF funds the IDBG would not proceed with the transaction.

[44] DFI Working Group on Blended Concessional Finance for Private Sector Projects. October 2017. https://publications.iadb.org/handle/11319/8600

- The IDBG will use blended finance only if it addresses externalities, information asymmetries or other institutional and market failures, or affordability constraints that are hindering positive market dynamics.
- The IDBG will prioritize the use of blended finance for projects with high development impact measured with its internal tool DELTA [45] (Development Effectiveness Learning Tracking and Assessment Tool).

Minimum Concessionality

- The IDBG will ensure that the use of CTF funds will not be greater than necessary to induce the intended investment.
- The IDBG will structure blended finance operations to address as directly as possible gaps in the financing structure and to minimize the need for future concessionality.
- The IDBG will, where possible, size the level of concessionality relative to the value of the obstacle identified.

Crowding in

- The IDBG will ensure that projects supported by the CTF should seek to catalyze private sector investment.
- The IDBG will avoid using CTF funds to enhance the risk/return position of the IDBG own funds in a project financing package without extending the benefits to other investors.
- The IDBG will increase scrutiny on the crowding-in effect when the CTF funds become identical or senior to commercial investors.

Commercial Sustainability

- The IDBG will maintain a high level of scrutiny of the commercial viability of projects and clients.
- The IDBG will identify, monitor and, where feasible, implement measures to overcome the obstacles identified that are barriers to commercial sustainability.
- The IDBG will structure the participation of CTF funds to align incentives to accelerate sustainable market development and reduce demonstrably the level of concessionality to repeat projects as market failures and other obstacles are reduced.

Governance

- The IDBG will ensure a level of independence or oversight within project teams and decision-making bodies managing CTF funds in blended concessional finance operations.
- The IDBG will explicitly monitor adherence to the blended concessional finance principles and guidelines, and as applicable, to CTF guidelines.
- The IDBG will identify and require client adherence to international best practice industry standards, including the environmental, social and governance standards and other policies and procedures of own-account projects.

[45] Measuring Development Results. http://bit.ly/IICdelta

2.11.3. Mitigation of Market Distortions

The application of the governance mechanisms described in the section above behaves as an institutional line of defense to mitigate the risk of market distortions. IDB Invest applies the Blended Finance Principles using an independent governance body, the Blended Finance Panel, that approves the terms and conditions of each blended finance investment **and assess the investment against those principles**. Only after an investment with concessional resources is approved by the Panel, it can move on towards IDB Invest's investment committee and, eventually, to the approval of IDB Invest Board of Directors.

2.11.4. Risks

Potential risks associated with the Program may include indicatively and non-exhaustively:

- **Demand Risk:**

  There is a risk of low demand for the Program's financial support or towards the innovation itself (i.e. cities not willing to switch to clean buses). This risk is mitigated by: i) the initial pipeline already identified; ii) Program flexibility in terms of countries, sectors and financial instruments, which will facilitate identification of additional eligible operations if those in the initial pipeline dropped.

- **Financing Risk:**

  Another potential risk is the level of co-financing required, given that the IDBG can only finance up to a certain amount of each project costs. The presence of IDBG financing and the financial, integrity, corporate governance, environmental and legal due diligence it entails, as well as the CTF administered funds participation, will lower the risk profile of the projects and are expected to enhance access to co-financing from financial institutions.

- **First Mover Risk:**

  Initial private sector projects will face typical risks associated with lack of experience and capacity in the sector. The projects will benefit from the use of the Technical Assistance Window, which will assist in the development of new business models with the relevant stakeholders in the very early stage of investments. This use of Technical Assistance funds together with the support that the IDBG brand will provide to the first movers will enhance the incorporation of the right project partners, co-lenders and off-takers.

- **Technology, obsolesce and competition risks:**

  Given the rapidly evolving technologies and diverse competition landscape, there is an increasing risk that the supported technologies will be overtaken by others (or the same, with higher efficiencies / productivity). This results in market and -more generally- credit risk of the projects. This risk is partially mitigated by IDBG's thorough due diligence, which includes, where relevant, technology and market advisors that can assess this risk.

- **Off-taker Risks:**

  Unlike traditional utility scale projects, some of the projects will have a varied set of off-takers, which requires a different way of assessing offtake credit risk. Risks arising from the uncertainty of the contracts may be addressed through financial structuring measures, such as sizing the project and exposure against different scenarios and electricity price projections.

- **Exit risks for Equity investments:**

  Exiting investments in private companies remains a challenge in LAC, especially in less developed private equity / venture capital ecosystems. Given the profile of companies invested, IDBG may be

unable to find suitable exit options to liquidate investments. This risk is partially mitigated by engaging potential acquirers and subsequent investors for each company early in the process in order to secure exit opportunities. IDBG has executed exits in the past of its equity investments and has monitored some exit arrangements of the companies invested by funds in which it has invested.

Annex 1. Implementation & Supervision Budget.

	Indicative Allocation
Implementation (staff costs for origination, screening, structuring, closing, and disbursing the projects) (IDB Invest)	320,000 US$
Transaction supervision, monitoring and evaluation (staff costs and travel) (IDB Invest)	480,000 US$
Program supervision and partnership account services (staff costs and travel) (IDB)	200,000 US$
Total	**1,000,000 US$**

Annex 2. The IDB Lab's Equity for Development Fund terms and conditions

The E4DF will be managed as a multidonor trust fund[46], mobilizing other institutional investor resources such as the Korea Venture Investment Corp.[47] – a sovereign wealth fund of Republic of Korea that has already committed its participation as the Anchor Investor. IDB Lab will be the executing counterpart of E4DF. Since 1996, IDB Lab has invested in over 90 VC funds in the region, with an aggregate amount of US$370 million. Through the acquired knowledge, IDB Lab has directly invested in 24 companies in LAC across 10 sectors and has exited 3 companies.

With a vast 30 years' experience supporting impact innovation in LAC, IDB Lab aims to support solutions to climate change urgent challenges by mobilizing private sector funding while making direct equity investments into innovative tech start-ups that solve key climate challenges in the region. This will be done in the form of a multidonor Trust Fund under the name of **Equity for Development Fund** ("E4DF", or the "Fund").

The objective of the Fund is to solve key development challenges in LAC with innovative solutions through equity and quasi-equity investments in early-stage tech start-ups in LAC. The E4DF focuses on climate innovation, with an investment thesis including mitigation, adaptation, and restoration tech-based and innovative startups.

The climate mitigation vertical is aligned and contains the four thematic areas of the CTF Futures Window: **Renewable Energy Plus (RE Plus), Energy Efficiency, Sustainable Transport, and Emerging Clean Technology Sectors.** Considering this, E4DF will invest a minimum of **US$ 5 million** (CTF investment) in early-stage startups aligned with the terms developed in this proposal and under the CTF DPSP III Futures Window.

Use of CTF Proceeds	CTF resources will be used as Equity to invest directly in the Equity for Development Fund facility, together with other participant investors on the same terms and conditions. The resources of the Fund will be used to invest in early-stage start-ups in LAC through direct equity and quasi-equity instruments. E4DF climate investment thesis is broad and includes many sectors within adaptation, mitigation and restoration; nevertheless, the US$ 5 million CTF funding will be invested only in startups aligned with the targeted sectors of the CTF Future Window targeted sectors.
Shareholding proportion	CTF participation will not exceed 33% of the shareholding interest in Equity for Development Fund, and 30% of the indirect shareholding interest in each company/project.
Fund Size:	The Fund is seeking aggregate capital contributions ("**Contributions**") from Partners to total between US$45 - US$60 million.

[46] Similar to the structure of ADB Venture (https://ventures.adb.org/), in which CIF is already an investor.

[47] KVIC has already showed commitment as the anchor investor of E4DF, always deploying its resources on a 40:60 basis in proportion to other Investors of the Fund.

Ticket size	This vehicle will invest tickets from US$1.0 million to US$3.0 million using equity and quasi-equity instruments[48] in "market take-off" stage start-ups, always co-investing in a VC financing round with qualified investors.[49]
Fund Term:	The Fund term will end on the twelfth (12th) anniversary of the date of the Final Closing, subject to extension for up to three additional one-year periods. All extensions will require IDB's approval, and, in addition, the first extension will require the approval of a simple majority of the Partners; the second and third extensions will require approval of three quarters (¾) of the Partners.
Closings:	The Fund will become effective on the date of its first closing ("First Closing") provided that the aggregate capital commitments by the Partners are not less than US$15 million. The Fund shall cease accepting Commitments ("Final Closing") on the date that is 18 months from the Initial Closing Date, subject to extension for up to 6 more months.
Returns	Target return, structure of payout and exit scenarios will be determined based on the needs of each project and negotiations with each client. CTF resources will have the same terms and conditions as the other participants'
Financial return expectations	The Fund will seek to obtain returns at an average nominal return at the portfolio level equal to twelve percent (12%) per annum in US$, prior to any reduction for payment of the Management Fee. However, some investments may result in full or partial loss and investors may receive less than the amount invested, given the changing market dynamics of start-up companies in LAC. Investment in the securities of smaller companies may involve greater risk than is generally associated with investment in larger, more established markets and companies that can result in significant capital losses that may have a detrimental effect on the value of the fund.
Operational policies and procedures.	Origination, screening, approval, execution, and administration of the investments financed by the Fund resources, will be subject to and in accordance with all applicable IDB Lab's fiduciary, integrity, procurement, environmental and social safeguards, financial and operational policies, and procedures. A two-stage investment approval process requires a concept clearance by IDB Lab's Investment Unit and the submittal of the eligible investment for IC approval.
Exit	Exit strategies and targets will be determined on a case-by-case basis, but in all cases, exits will be effect along with the IDBG's equity investment. Exits will typically be targeted for periods within 8-10 years from the date of investment. However, regardless of the exit target and strategy to be pursued in each project, timing of the actual exit from investment position cannot be guaranteed and will be determined over the course of project supervision subject to the Fund Term provisions above.

[48] Simple Agreement of Future Equity (SAFE), Convertible Notes, and Preferred Stock.

[49] Some of the private Venture Capital investors that have co-invested with IDB Lab in the past are: Valor Capital (Brazil), Global Founders Capital (Germany & Global), Clocktower Ventures (USA), DILA Capital (Mexico), ALLVP (Mexico), among others.

Advisory Committee	The Advisory Committee ("**AC**") will consist of Partners and will convene semi-annually to discuss strategic direction of the Fund, matters concerning the Fund's investments and progress, and to advise as needed.
Investment Committee:	The IDB will seek to establish an Investment Committee ("**IC**"), which will be responsible for the approval, on-going management, and exit of Fund investments. The Investment Committee will consist of IDB Lab's General Manager, who will preside, an IDB Lab's CIO and an independent member who is a Special Matter Expert in LAC start-up markets. IC approval of any investment shall require a simple majority, with the affirmative vote of the IDB Lab's General Manager being always required for approval. Formal approval of each investment project will proceed as in accordance with IDB Lab investment projects, or by relevant delegation of authority.
Investment Strategy and IDBG co-investment commitment	The Fund's investment strategy ("**Investment Strategy**") includes (i) Co-invest in direct equity investments of Eligible Companies with the IDB lab on a 70:30 ratio (the Fund will contribute 70 per cent and IDB Lab 30 per cent under identical terms and conditions); (ii) adopt a patient capital approach in making portfolio investments in Eligible Companies; and (iii) co-invest wherever possible with other co-investors, preferring in any co-investment not to act as a lead arranger. The IDB Lab will commit to co-invest with the Fund during the investment period up to US$20 million if the Fund reaches its maximum proposed size of US$60 million.
Contributions	The funding Partners[50] will provide financial resources ("Contributions") to the Fund. Contributions will be made in US dollars and deposited into the account indicated in writing by the IDB and will be formalized through the subscription of a contribution letter. The IDB acceptance of any contribution letter will be subject to all applicable internal approvals
Distributions:	Investment proceeds from investments will be allocated to the participating Partners with reimbursable contributions as follows: a. First, return 100% of its capital contribution to each Partner; b. Second, Preferred Return of 5% to each Partner; c. Third, a "20% catch-up" to the Fund Administrator equivalent to receiving 20% of the of the distributions realized in b plus the distributions realized in this step. d. Fourth, residual amounts, thereafter, eighty percent (80%) to the Partners and twenty percent (20%) to the Fund Administrator.
Management Fee	The Fund Administrator will charge an annual Management Fee against Fund resources to compensate the Fund Administrator for all staffing and other internal costs of the Fund Administrator attributable to administering the Fund. The annual Management Fee will be calculated as follows:

[50] The funding Partners ("**Partners**") are entities that provide financial contributions to the Fund. These may include multilateral institutions, bilateral institutions, sovereign donors (ministries, national development agencies, and/or any other publicly owned entities), institutional investors, private companies, and foundations to cooperate and advance a mutual interest.

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Table 1. Management Fee

Fund size range (US$, millions)	0.0 - 45.0	45.01 – 55.0	55.01 - 60.0
Investment Period Annual Fee on the committed capital contributions[1]	2.5%	2.25%	2.0%
Holding Period Annual Fee on the committed capital contributions	2.0%	1.75%	1.75%

1. Committed capital contribution is the money that the Partners have agreed to contribute to the fund. These contributions can either be made upfront or over an agreed-upon period of time and are set forth in the relevant agreement.
</td></tr>
<tr><td>Administration</td><td>The Fund will be administered as a multi-donor trust fund in accordance with all applicable IDB policies and procedures. The IDB designates IDB Lab as the responsible Unit for the administration of the Fund and its obligations under this Agreement. IDB Lab will serve as the manager and administer of the Fund (“Fund Administrator”). IDB Lab will originate, screen, invest, manage, exit, monitor and report the fund’s financings and investments (as delegated by the General Partner), including identifying and managing investments. The IDB will charge a management fee to the Partners that will be used to offset the operational expenses incurred in fulfilling the IDB’s duties as trustee and manager.</td></tr>
<tr><td>Investment Period</td><td>The Fund investment period (“Investment Period”) will extend from the First Closing Date to the 6th anniversary of the Final Closing.</td></tr>
<tr><td>Follow-on</td><td>During the Investment Period the Fund Administrator may use up to 40% of the total investable amount for follow-on investments in Eligible Companies already invested by the Fund, with good track records and high exit potential.</td></tr>
<tr><td>Holding Period</td><td>The holding period (“Holding Period”) will begin once the investment period is finalized. The Fund will seek to hold portfolio investments for periods no longer than ten (10) years.</td></tr>
<tr><td>Reinvestment:</td><td>During the Investment Period, the Fund Administrator will have the option to recycle returns from Portfolio Investments back into the Fund for reinvestment. Recycled capital cannot exceed 10% of the committed capital contributions.</td></tr>
<tr><td>Fund Expenses:</td><td>Fund resources shall also be used to cover the following expenses (“Fund Expenses”): (i) Set-up and organizational expenses; (ii) audited financial statements; (iii) external financial audits; (iv) evaluations, reports and (v) outside legal and other costs necessary to Fund investments and exits. The contracting of consulting services and the procurement of goods (if any) necessary to the Fund will be carried out in accordance with IDB policies and procedures.</td></tr>
<tr><td>Reporting:</td><td>The Fund Administrator will maintain records for the resources administered under the Fund. The Fund Administrator will deliver the following statements and reports to the Partners:
a. Annual Report. No later than June 30th of each year, the Fund Administrator will deliver an annual report (“Annual Report”) on the investments financed by the Fund during the previous calendar year.</td></tr>
</table>

	b. **Audited Financial Statements.** The Fund will be subject to an external audit requirement. No later than June 30 of each year, IDB Lab will deliver to the Partners the audited financial statements of the Fund. Such audited financial statements are prepared in accordance with the IDB's existing policies and accounting standards for trust funds' financial reporting, as updated from time to time. c. **Quarterly Reports**. Thirty (45) Business Days following the end of each quarter, the Fund Administrator will issue a quarterly report reflecting Fund activities to-date summarizing (a) the operations of the Fund, (b) the Fund's impact targets, (c) the highlights of the financial performance of the Fund, (d) investments executed, and (e) pipeline. *The costs associated with the annual reports, audited financial statements, and evaluations will be deducted from the Resources of the Fund as stated in Reporting section.*
Eligible Criteria	The Fund's aggregate contributions will be invested in tech-based start-up companies with presence in IDB member countries and benefiting the respective populations in LAC. In order to benefit from the Fund, the eligible company shall comply with the following criteria: • **Geography**[51]: Each company must have proven impact and business operations in LAC market and/or the intention to expand its business in LAC. Specifically, the company shall comply with one of the following criteria: a) Headquartered (HQ) or incorporated subsidiaries in LAC, Joint Venture in LAC, or have a partnership in LAC; b) Team presence in LAC (founders and/or executives from LAC region is a plus); c) Significant operational revenues originating in LAC; • **Priority Sectors**:[52] The Eligible Company must operate in one or more of the following sectors: AgTech, EdTech, WorkTech, HealthTech, FinTech (financial inclusion), and Infrastructure Services (Energy, Mobility, Connectivity, Clean Tech). • **Round Size**: Pre-Series A to Series B. Round size US$3.0 - US$20 million. • **Investment Ticket Size**: US$1 million to US$3 million. • **Use of resources**. The majority of each round size will be used to expand operations in LAC.
Beneficiaries	The beneficiaries are the tech-based start-up companies in LAC and people which gain access to innovative products, services, and/or economic opportunities attributable to the Fund.

[51] E4DF geography investment thesis is broader, nevertheless, the US$ 5 million CTF funding will be invested only in startups aligned CIF Future Window targeted countries.

[52] 80% of the E4DF resources will be allocated on its climate investment thesis. Such thesis is broader, nevertheless, the US$ 5 million CTF funding will be invested only in startups aligned with the targeted sectors of the CIF Future Window targeted sectors.

Membership to the Fund and Relationship with partners	Membership and additional contributions from Partners to the Fund shall be formalized through the signature of individual contribution letters. The IDB's acceptance of any contribution letter is subject to all applicable internal approvals. The IDB will maintain regular contact with the Partners, including: (i) one in-person Annual Consultation Meeting to review the Fund's strategic direction and operational progress; and (ii) a mid-year virtual update on the Fund's progress.