PUBLIC
SIMULTANEOUS DISCLOSURE

DOCUMENT OF THE INTER-AMERICAN DEVELOPMENT BANK

PARAGUAY

PROMOTING PRIVATE SECTOR INVESTMENTS IN ENERGY EFFICIENCY IN THE INDUSTRIAL SECTOR IN PARAGUAY

(PR-L1146)

LOAN PROPOSAL

This document was prepared by the project team consisting of: Maria Netto (IFD/CMF) Project Team Leader; Manuel Fernandini (CMF/CPR) Alternate Team Leader; Omar Villacorta, Gloria Lugo, Alexander Vasa, Veronica Valencia, Rodrigo Chaparro, Alison Arauz Herrera, Isabelle Braly-Cartillier (IFD/CMF); Filippo Berardi and Gloria Visconti (CSD/CCS); Emilio Sawada, Joel Hernandez-Santoyo and Roberto Aiello (INE/ENE), Alonso J. Chaverri-Suarez (LEG/SGO); Daniel Hincapie Salazar (ORP/ORP); Fernando Glasman, Bruno Candia and Jorge Luis González (FMP/CPR); and Jacqueline Bueso-Merriam (SPD/SDV).

CONTENTS

Annexes	
Annex I	Development Effectiveness Matrix (DEM) - Summary
Annex II	Results Framework
Annex III	Fiduciary Arrangements

Electronic Links

Required

1. Monitoring and Evaluation Plan
2. Environmental and Social Management Report (ESMR)

Optional

1. Economic Analysis
2. Operation Flow Chart
3. Disbursement Plan
4. Market Study Carlino H.
5. Analysis of Financial System and IFIs
6. Survey Evidence on IFIs
7. Presentación Operacional de AFD y Gestión de Riesgos Financieros
8. *Plan Nacional de Desarrollo* 2014-2030
9. *Plan Nacional de Eficiencia Energética de la República de Paraguay*
10. *Plan Nacional de Cambio Climático*
11. *Contribuciones Nacionales de la República del Paraguay*
12. Prospectiva Energética de la República del Paraguay 2013-2040
13. *Ley de Deforestación Cero*
14. Paraguay: 2017 Article IV Consultation-Press Release and Staff Report
15. Gender Assessment and Gender Action Plan
16. *Borrador de Reglamento Operativo (*)*
17. Safeguard Policy Filter (SPF)

(*) At the request of the borrowing country, the information contained in this electronic link is confidential in accordance with the country-specific information exception in paragraph 4.1 i of the Bank's Access to Information Policy (document GN-1831-28).

Abbreviations	
AFD	*Agencia Financiera de Desarrollo*
AMA	Accreditation Master Agreement
ANDE	*Administración Nacional de Electricidad*
CEPAL	*Comisión Económica para América Latina y el Caribe*
CO_2	Carbon Dioxide
COP21	21st Conference of the Parties to the UNFCCC
EE	Energy Efficiency
ESI	Energy Savings Insurance
ESTP	Energy Service and Technology Providers
FAA	Funded Activity Agreement
GCF	Green Climate Fund
GDP	Gross Domestic Product
GHG	Greenhouse Gas
GIZ	*Agencia Alemana de Cooperación Técnica*
GWh	Gigawatt-hour
IDB	Inter-American Development Bank
IEA	International Energy Agency
IFI	Local Financial Intermediation Institution
IMF	International Monetary Fund
kWh	Kilowatt-hour
ktoe	Kilotons of oil equivalent
LAC	Latin America and the Caribbean
MDB	Multilateral Development Bank
MW	Megawatt
MWh	Megawatt-hour
NDB	National Development Bank
NDC	Nationally Determined Contribution
NPL	Non-Performing Loans
OECD	Organization for Economic Co-operation and Development
OR	Operating Regulations
PND	*Plan Nacional de Desarrollo 2014-2030*
SMEs	Small and Medium Enterprises
RE	Renewable Energy
TC	Technical Cooperation
UNFCCC	United Nations Framework Convention on Climate Change
UNIDO	United Nations Industrial Development Organization
US	United States
VMME	Vice-Ministry of Mines and Energy

PROJECT SUMMARY
PARAGUAY
PROMOTING PRIVATE SECTOR INVESTMENTS IN ENERGY EFFICIENCY IN THE INDUSTRIAL SECTOR IN PARAGUAY
(PR-L1146)

Financial Terms and Conditions				
Borrower: *Agencia Financiera de Desarrollo (AFD)* **Guarantor:** Republic of Paraguay **Executing Agency:** *AFD*			**Green Climate Fund**	
			Amortization Period[(a)]**:**	20 years
Source	**Amount (US$)**	**%**	**Disbursement Period:**	5 years
IDB (Green Climate Fund - GCF)[(d)]**:**	20,000,000	50	**Grace Period:**	5.5 years[(b)]
			Commitment fee:	0.50%
Local:	20,000,000	50	**Interest rate:**	0.75%
			Service Fee:	0.50%[(c)]
Total:	40,000,000	100	**Currency of Approval:**	Dollars of the United States of America

Project at a Glance
Project Objective/Description: The general objective of the program is to promote Energy Efficiency (EE) investments by Small and Medium Enterprises (SMEs) in Paraguay, improving their productivity in the long-term. The specific objectives are: (i) to increase access to medium and long-term finance for EE investment projects by SMEs; and (ii) to reduce Greenhouse Gas (GHG) emissions, supporting the achievement of the country's climate change goals.
Special Contractual Clause prior to the first disbursement of the loan: AFD shall provide evidence of approval and entry into effect of the Operating Regulations (OR) of the program in terms previously agreed with the Bank (see ¶3.7).
Exceptions to Bank Policies: An exception to GP-104-2 "Guarantees required from the borrower" (OP-303) is requested so that the sovereign guarantee from the Republic of Paraguay extends only to the monetary obligations of the loan, including repayment of principal, payment of interest and fees (see ¶3.1).

Strategic Alignment						
Challenges[(e)]:	SI	☐	PI	☑	EI	☐
Cross-Cutting Themes[(f)]:	GD	☐	CC	☑	IC	☐

(a) The period will be calculated from the date of entry into force of the Loan Agreement between IDB and AFD. Payments will be made bi-annually. Amortization payments, commitment and service fees will be made at the same date as interest payments.
(b) Repayment will occur in 30 installments commencing on the first interest payment date following the fifth anniversary of the date of effectiveness of the loan agreement
(c) The service fee established by the GCF applies only to loans financed with GCF resources. The service fee is set to cover the GCF's administration and mobilization costs. The service fee is payable on the outstanding principal amount
(d) The Board of the GCF at its nineteenth meeting (February 27 to March 2, 2018) approved a funding proposal to provide resources to be used for the financing of this program. Resources from the GCF will be used in accordance with the provisions set forth the Accreditation Master Agreement (AMA) entered into between the GCF and the IDB on August 29, 2017, pursuant to Resolution DE-31/17 (document GN-2895), and those set forth in the Funded Activity Agreement (FAA) for this program, which will be entered into between the GCF and the Bank subject to the approval of this Loan Proposal by the IDB's Board of Executive Directors. GCF resources for the program will be available once the FAA has been signed and entered into effect.
(e) SI (Social Inclusion and Equality); PI (Productivity and Innovation); and EI (Economic Integration).
(f) GD (Gender Equality and Diversity); CC (Climate Change and Environmental Sustainability); and IC (Institutional Capacity and Rule of Law).

I. Description and Results Monitoring

A. Background, Problem Addressed and Justification

1.1 **Economic context.**[1] Amidst the latest downturn in global commodity prices, Paraguay has managed to resist the regional contraction trend, positioning itself as one of the fastest growing economies in South America. Paraguay closed 2016 with 4.1% real growth of Gross Domestic Product (GDP), compared to 3.1% in 2015. The country has made good progress on the macroeconomic front after introducing important economic reforms, such as the adoption of inflation targeting in 2011, key to maintaining the price index stability and the exchange rate, and a disciplined fiscal policy, including a Fiscal Responsibility Law (Law 5098/13) that has contributed to the consolidation of public debt.[2] Policy interest rates have been lowered twice in 2016,[3] and the improved solvency facilitated access of Paraguay to international capital markets, as evidenced by successful sovereign bond issuances in 2017 at 4.7%.

1.2 In the short and medium term, growth rates projections are in the order of 3.5%-4.0% and a strengthening of the fiscal position, in accordance with the provisions of the Fiscal Responsibility Law, is expected. Electric energy through the binational hydroelectric power plants, along with the highly productive soy and livestock production are leading economic activities. The country's small but robust low-end manufacturing sector is also expected to become a strong contributor to this growth. Yet, the Paraguayan economy presents vulnerabilities in different social, productive and institutional aspects.

1.3 **Paraguay's energy sector and the importance of Energy Efficiency (EE).** Paraguay's National Energy Policy (signed by Executive Decree 6092 on October 2016) defines the country's energy mix in the short, medium and long-term (25 years) and acknowledges the importance of energy as key to realizing economic growth, industrial development and social progress. The policy also establishes the basics of public policy-making geared towards addressing the country's energy needs. The policy outlines EE as one of its prioritized objectives and states an Action Plan composed of ten elements to encourage the growth of this sector, including a plan to promote EE in industry and support technology, equipment and process improvement through its National Energy Efficiency Plan (ELO#9)[4] and its *Comité Nacional de Eficiencia Energética*. The policy also states an Action Plan to ensure mobilization of capital for energy-related investments, including EE.

1.4 One of the pillars of the National Energy Efficiency Plan is the implementation of programs on the efficient and rational energy use, supporting the prioritization and development of specific measures in all sectors. Specifically, it seeks to introduce EE measures in the use of steam and heat, focused on promoting cogeneration,

---

1 Data presented in this section was obtained from: Paraguay: 2017 Article IV Consultation-Press Release and Staff Report, International Monetary Fund Country Report No. 17/233, July 2017; The World Bank, Country Overview: Paraguay, October 2017.

2 In 2016 inflation reached 3.9%, below the 4.5% target set by the Central Bank, and the central government's deficit as a percentage of GDP stood at 1.5%, compared to 1.8% in 2015. Public debt, at 22% of GDP, is now one of the lowest in the region.

3 Reference rate reached 5.5% in 2016, down from 6.8% in 2014 and 5.8% in 2015.

4 VMME, 2014.

improvements in equipment and processes (substitution and modernization) to incorporate new technologies with higher efficiency levels, technical assistance and capacity building in EE project implementation and the implementation of energy audits and energy management systems.

1.5 Supply of clean and Renewable Energy (RE) from hydropower in Paraguay is abundant with a total installed capacity of 7,775 Megawatts (MW) in the Paraguayan interconnected system.[5] Roughly 66% of Paraguay's primary energy production comes from two large binational hydroelectric projects shared with Brazil[6] and Argentina. However, only about 27% of the energy consumed in the country is sourced by hydropower-sourced electricity. In fact, 43% of total energy consumption in Paraguay is based on biomass.[7] Electricity prices are low, and its demand corresponds mainly to power exports to their neighbor countries.[8]

1.6 Particularly at the industrial level, firewood and biomass source 80% of the energy consumed (especially for direct heat and steam)[9] and is often used very inefficiently. Although this source is relatively clean[10] and it is less expensive than electricity, biomass in Paraguay is primarily supplied by non-sustainable systems of production, instigating deforestation and making the system vulnerable. As a result, restrictions to the supply of biomass have been imposed by the Zero Deforestation Law (Law 2524/04), enacted on December 2004. The objective of this Law is to protect and preserve native forests in the eastern region of Paraguay (*Región Oriental*), where most of the industrial activity is located.[11] As enforcement of this law is strengthened, and biomass markets become formal, biomass prices are expected to increase considerably.[12]

1.7 A reduction in or displacement of energy use in the industrial sector in Paraguay, would not only contribute to its long-term sustainability, but it would produce benefits aligned with objectives to reduce Greenhouse Gas (GHG) emissions and

---

5 ANDE, 2016.

6 The main important dams are Itaipu (7,000MW, shared with Brazil and Argentina) and Yacyretá (1,600MW, shared with Argentina) and the national plant Acaray (200MW). As these plants are shared with Brazil and Argentina, their total capacity is larger than Paraguay's interconnected system.

7 *Balance Energético Nacional* 2016, VMME, 2017.

8 Energy exports to Brazil accounted for 4,315MW, 63% of total energy produced by the Paraguayan side. In terms of transmission, only very recently the systems that link Asuncion and the country's main economic activity areas with the large hydroelectric plants at Itaipú, Yacyretá and Acaray have been completed and put to operation. Although some difficulties remain in the development of distribution grids, the growth and expansion of quality energy access is among the goals of Paraguay's current administration. The *Administración Nacional de Electricidad* (ANDE) is now implementing its Masters Work Plan 2023, after which the country aspires to be able to supply future industrial clients competitively. ANDE's Master Works Plan foresees investments of US$2.9 billion through 2018, reaching US$5 billion in 2023, with financing from multilateral credit institutions.

9 *Balance Energético Nacional 2016*, VMME, 2017.

10 If wood use is managed sustainably and wood resources are replanted and grown. FAO (1997).

11 The law includes a prohibition to issue permits, licenses, authorizations and/or any other legal document authorizing the transformation or conversion of native forest areas. Furthermore, Law 515/94 prohibits exports and trafficking of wood rolls, lumps and beams. In addition, it prohibits the installation and operation of wood processing industries less than 20 kilometers from the Brazilian border.

12 The price of firewood has increased by 580% between 2008 and 2017, reaching US$33 per ton of firewood in March 2017. In some regions of the country, especially those which encompass the Atlantic Forest (such as Alto Parana), firewood price has shown slightly higher increases, due mainly to the lack of supply in those regions and the increased demand from others, such as el Chaco. Further increases in firewood prices are expected as new restrictions on deforestation in the Chaco region come into force in 2018.

deforestation.[13] The *Contribuciones Nacionales de la República de Paraguay (OEL#11)* (NDC)[14] submitted by Paraguay in 2015, established a unilateral goal of 10% of national Greenhouse Gas (GHG) emissions reduction by 2030 and an additional 10% of reductions by 2030 conditional of access to climate finance. The NDC also refers to the diverse objectives proposed in the *Plan Nacional de Desarrollo 2014-2030 (ELO#8)* (PND),[15] including, inter alia, reducing consumption of energy, increasing consumption of renewable energy, and other goals that benefit from reduction of use of biomass and EE, such as the effective control of deforestation and increasing efficiency in the agricultural system.

1.8 To achieve the goals set under the NDC, Paraguay developed the first phase (Mitigation Strategy) of a National Climate Change Plan (2014) (ELO#10), which among its strategic lines of action includes the following: (i) promote EE measures and provide financial incentives and access to finance; (ii) strengthen institutional capacity to coordinate actions towards EE and sustainable use of energy; (iii) promote and adopt sector policies towards clean energy through measures oriented to private sector investment in EE equipment; (iv) mobilize financial resources to improve energy systems, including in the industry sector; and (v) promote reforestation with energy purposes to diminish pressure on native forests.

1.9 **Investment in EE and the potential in Small and Medium Enterprises (SMEs).** Although opportunities for investing in EE exist in a wide range of sectors of the economy, smaller-sized firms in Paraguay pose a distinct opportunity due to the important role they play as drivers of economic growth, innovation and job creation. According to the International Energy Agency (IEA) global estimates, SMEs consume more than 13% of total energy demand, and EE measures could reduce as much as 30% of their consumption. In Paraguay, new industrial technologies can save between 5% and 54%, especially where obsolete equipment is replaced.[16] IEA's analysis furthermore indicates that investing in SMEs' EE is a key way to: (i) reduce their energy costs, thus increasing their profitability and competitiveness; (ii) reduce their exposure to energy price volatility; and (iii) contribute to wider policy objectives such as boosting employment opportunities, expanding the market for energy-efficient goods and services, improving energy security, reducing GHG emissions, and deferring investments in additional power generation.[17]

1.10 Paraguayan SMEs make up for 97.1% of the economic units in the country and generate 65.2% of employment. However, these firms normally face difficulties to access new technologies and introduce business models that will make them more

[13] *Informe nacional de monitoreo de la eficiencia energética de la República del Paraguay*, Comisión Económica para América Latina y el Caribe (CEPAL), 2016. While reducing deforestation is not a direct objective of the program, its design includes considerations related to ensuring that projects financed are sourcing their firewood from certified sources. This condition shall be included among the criteria established in the program's Operating Regulations.

[14] The NDCs are public outlines of climate actions countries intend to take under the new international agreement adopted in December 2015 at the 21st Conference of the Parties to the UNFCCC (COP21) in Paris. United Nations Framework Convention on Climate Change (UNFCCC), 2016.

[15] As part of the PND, the Government of Paraguay supports economic diversification strategies and a strong public investment effort to alleviate binding infrastructure constraints.

[16] See also Table 2.2 in Economic Analysis and Carlino et al (2017) (Market Study).

[17] Accelerating EE in Small and Medium-Sized Enterprises. IEA, 2015. According to this study, large industrial energy users are increasingly benefiting from EE programs, but industrial and commercial MSMEs still receive little support, as their energy use and potential for EE is "largely unnoticed".

productive, largely due to their low levels of investment, rooted in the problems they face when trying to access credit. Bank lending is the most common source of external finance for many SMEs.[18] While a relatively large share of small- (46.6%) and medium-sized (68.2%) have access to a formal line of bank credit, the proportion of SMEs with access to medium and long-term[19] credits is lower.[20] The limited availability of credit bureaus,[21] lack of appropriate financial information by SMEs, high collateral requirements, and lack of credit history and documentation, lead to information asymmetries that translate into high transaction costs and high interest rates which make longer term project unviable. Especially manufacturing firms (17%) identify access to finance as a major constraint.[22] All these in addition to structural imperfections of the local financial system associated to the impossibility to expand credit,[23] including:

a. Paraguay's financial system is liquid but lacks depth. In 2016, liquid reserves as a share of assets were 24.5%, above the average for the region (22.8%) and for middle-income countries (21.6%). Domestic credit to private sector as a percentage of GDP was 52.1%, outperforming neighboring countries such as Argentina (14%) and Uruguay (28.2%), but still lagging behind when compared with the middle-income country average (97%) and larger economies like Brazil (62.2%) and Chile (112.1%).[24] Capital markets are not developed and are not able to channel resources to the private sector efficiently; thus, banks, cooperatives and other financial institutions dominate the market, making bank credit the main source of financing for economic activity.[25]

b. The banking system remains profitable and capital ratios appear sound. But after rapid growth during the last decade, bank credit in Paraguay has decelerated,[26] mainly due to lower commodity prices. Furthermore, authorities are gradually introducing risk-based bank supervision, including a new banking law (Law 5787/16) to strengthen financial sector oversight. Intermediation costs are high: in 2006-2015 the bank spread[27] was close to

---

[18] This appears more relevant in the case of newer, innovative ventures with a higher risk-return profile. See New Approaches to MSME and Entrepreneurship Financing: Broadening the Range of Instruments, Organisation for Economic Co-operation and Development (OECD), 2015; G20/OECD High-Level Principles on MSME Financing, OECD, 2015.

[19] Loans of more than two years.

[20] *National Economic Census. Dirección General de Estadística, Encuestas y Censos*, 2011. World Bank Enterprise Survey. Paraguay 2017.

[21] According to the World Bank, credit bureaus in Paraguay coverage is 45%, well below countries like Ecuador (53%), Brazil (79%), Colombia (89%), and Peru, Argentina, Mexico y Uruguay (100%).

[22] World Bank Enterprise Survey. Paraguay 2017.

[23] According to the *Centro de Investigaciones Económicas* (2011), the financing needs of Paraguay's private sector are equivalent to about 10% of GDP, of which only 4% is provided by the financial sector.

[24] World Bank, 2017, World Development Indicators, Domestic credit to private sector.

[25] Following international trend, other sources of financing (venture capital in the form of angel investing or equity crowdfunding, credit cooperatives) are becoming increasingly available in the country. Even though their participation in terms of volume is still small –the volume of credit through Paraguayan crowdfunding platforms in 2016 was US$9.4 million, compared to considerably larger volumes in Mexico (US$114 million), Chile (US$97 million) or Brazil (US$64 million), 99% of loan originations in Paraguay correspond to SME and micro enterprises, with a loan average size of US$1,500. As these platforms continue to prove a viable solution to financial constraints for smaller firms, challenges related to regulation and policies to promote them need to be addressed for them to thrive.

[26] Private credit growth, although sustained over the period 2006-2015 (14.7%), was only 1.2% in 2016 compared to levels close to 20% in 2013 and 2014 (IMF, 2017).

[27] Difference in borrowing and lending rates of financial institutions.

20%, almost three times the region's average; and collateral requirements represent around 190.1% of the value of the loan requested (177% in the case of the manufacturing sector).[28]

c. Long-term credit availability in the system has improved, but the funding structure of local banks still restricts medium and long-term lending. In fact, 60% of deposits are short term and some 80% of the loan portfolio is concentrated in short-term credit (up to one year). Moreover, there is a liquidity mismatch in the system, as short-term liabilities are higher in volume than short-term assets.[29] In order to cover for this gap, the system must maintain liquid reserves (around US$5 billion kept in the Central Bank and public share investments),[30] which mitigates the liquidity risk but also poses restrictions to the availability of credit. Higher Non-Performing Loans (NPL)[31] and higher provisioning has prompted banks to be cautious in extending new credit, resulting in poor financing conditions for the market.[32]

d. Even when more relaxed financial conditions can encourage bank lending, conservative risk management policies are imbedded in the system, partly due to adverse effects of previous recurrent financial crisis.

1.11 The described lack of availability of long-term credit in Paraguay directly undermines firms' capacity to invest, and reduced investment prevents the latest technologies associated to capital goods from being used.[33] Particularly in the case of industrial EE in SMEs, while it can have a significant impact in the firm's energy consumption, contributing toward reducing company expenses and increasing productivity and competitiveness,[34] these investments also involve high up-front costs and long payback periods,[35] further limiting financial flows to these projects.[36]

1.12 In addition to the limited supply of financing for investment, SMEs face other barriers that deter them from adopting EE measures, including:[37]

a. SMEs usually do not have enough time and resources to explore EE options, and have very little information about where and how energy is used in their firms and on the performance of new equipment and availability of reliable service for its installation and maintenance. Furthermore, they usually do not have internal capacity to develop and implement EE projects and are likely

---

[28] World Bank Enterprise Survey, 2017.
[29] The gap for the entire system is estimated in US$4 billion.
[30] *Informe de Estabilidad Financiera*. Central Bank of Paraguay. May 2017.
[31] NPLs have increased from 1.84% in 2014 to 3.1% in April 2017.
[32] See also Long-term Finance in Paraguay. Beck, 2018.
[33] The Global Competitiveness Report 2016-2017. World Economic Forum, 2017. Access to finance was selected by the productive sector as one of the most problematic factors for doing business in Paraguay.
[34] Industrial EE and competitiveness, Working Paper 05/2011, United Nations Industrial Development Organization (UNIDO), 2011.
[35] The average payback period of these projects is 3.6 years, which is incompatible with the conditions offered by the banking system, generating mismatches in loan amortization periods.
[36] Carlino, H. 2017. *Guía para la estructuración de instrumentos financieros para la promoción de la eficiencia energética - Estudio de caso de la Agencia Financiera de Desarrollo de Paraguay (See also Estudio de Mercado* Carlino H.)
[37] Carlino et al (2017) *Guía para la estructuración de instrumentos financieros para la promoción de la eficiencia energética: Estudio de caso de la AFD de Paraguay*, pages 28, 41, 62 (Carlino et al (2017); and CEPAL-Agencia Alemana de Cooperación Técnica (GIZ) (2013) *Eficiencia energética en América Latina y el Caribe: avances y desafíos del último quinquenio*. Page 294.

to distrust the capacity of local Energy Service and Technology Providers (ESTP) to actually deliver the energy savings they pledge. This uncertainty has an impact in the decision-making process of SMEs, who seldom view investments in EE as a priority.

b. The number of local ESTPs is relatively low and they do not have financial capacity to take on risks in these investments. Thus, their business is dependent on SME willingness to invest and their capacity to develop bankable business plans to access financing.

c. Local Financial Intermediation Institutions (IFI) lack familiarity with risks and returns associated to these projects, and they do not have sufficient expertise to include future cash flows generated by EE investment projects in the risk analysis, resorting only to and the use of traditional asset-based lending.[38]

1.13 In summary, the financial system operates mainly on a short-term horizon (1.55 years in the banking system), while EE projects have longer payback periods and require longer terms. The bias towards short-term credit is itself a barrier for EE initiatives. Furthermore, SMEs are unaware of the benefits of this type of projects and as long as they do not understand the underlying business case, they naturally prefer less expensive equipment that is older and inefficient. A market study conducted as due diligence for the program shows the vast potential for EE investments in SMEs that operate in the Paraguayan industrial sector, often with equipment that is outdated and inefficient. SMEs also lack access to long-term finance and frequently cite a lack of financing as a barrier to investment.[39] In this context, the promotion of an integral financial strategy that combines the provision of medium and long-term credit with the development of mechanisms to incentivize investment is considered essential to improve the reliance on this market and encourage relevant actors to increasingly participate in it. This program will provide financing at longer terms and through Technical Cooperation (TC) activities the program will help potentiate demand for EE projects (see ¶1.15). In fact, this credit line earmarked for EE projects is the first of its kind in Paraguay.

1.14 The *Agencia Financiera de Desarrollo* (AFD), Paraguay's National Development Bank (NDB), was created to mitigate the structural flaws verified in market terms in order to spur economic development and promote job creation and is the sole government's executing agency for loan agreements or grants that provide financing for development programs and projects.[40] As the only second-tier bank in Paraguay, it is in a unique position to engage IFIs and private investors, align development financing with national priority mitigation actions, and canalize international climate funding as well as mobilizing domestic financial resources to promote scaled up investments in EE projects.

---

38 See ¶1.5-1.6 in Analysis of Financial System and LFIs (ELO#5).

39 According to Paraguay's most recent World Bank Enterprise Survey (2017), access to finance ranks 4th out of 15 business environment obstacles; 8.1% of firms surveyed identify access to finance as a major constraint (9.6% when looking at data from the small businesses subgroup only).

40 AFD is the only second tier financial institution and grant and loan executing entity for financial intermediation to LFIs in Paraguay. AFD was created in 2005 from the unification of several credit entities of the Paraguayan State, such as the Rural Development Fund, the Industrial Development Fund, and the Technical Project Executing Unit of the Central Bank of Paraguay, which had previously financed development projects. See Laws: 2640/2005 and 3330/2007 for the creation of AFD. See: Institutional Presentation of AFD and Management of Financial Risks (ELO#7).

1.15 **The problem to be addressed by the program.** Unlocking Paraguay's full EE potential requires a well-designed financial strategy that coordinates all relevant actors (including government institutions, ESTPs, IFIs and SMEs) to incentivize private investment. The above-identified barriers to investment in EE by SMEs require a full-fledged intervention that combines: (i) medium and long-term financing under terms and conditions that are adequate for EE projects (financing supply); and (ii) design, development and implementation of incentive mechanisms that can encourage and prioritize investment decisions within firms with potential to develop viable projects, particularly SMEs (financing demand). This strategy will be implemented via two complementary interventions:[41]

a. The proposed program will provide medium to long-term financing using concessional resources from the Green Climate Fund (GCF),[42] which combined with local cofinancing from AFD will contribute to expand the supply of credit for EE projects.

b. Complementary TC activities under PR-T1249, currently in preparation, funded with GCF grant resources and to be approved separately, will focus in the development of instruments to mitigate the risks of these projects, including: monitoring methodologies that help demonstrate the real capacity of equipment to generate energy savings and enable to adequately monitor the indicators of the results matrix (see ¶1.29), standard contracts to back the commitments of local providers related to installation of equipment, independent validation, monitoring and performance (energy savings) guarantees, a savings insurance scheme that covers for specific events that may result in less energy savings than expected, an electronic registry to monitor, verify and report energy savings according to international standards in projects financed, program promotion and awareness, capacity building and training.[43]

c. An additional TC PR-T1257, also funded with GCF grant resources and to be approved separately, supports the Vice-Ministry of Mines and Energy (VMME) of Paraguay in promoting an institutional, policy and regulatory enabling environment for private investments in EE to enhance the execution of policies to reduce energy intensity across the economy and improve the efficiency and sustainability of biomass as energy source. Activities include, among others, support to targeted assessments of biomass use as energy source, primary energy balance analysis and selected energy audits to identify areas of opportunity for EE in selected subsectors, mid and long-term planning analysis considering EE as a supply option, identification of further

---

[41] This scheme has been recognized by the "International Climate Finance Lab" as one of the most promising financing strategies to promote and leverage private investment in EE. See: Energy Savings Insurance. The Global Innovation Lab for Climate Finance.

[42] The GCF is a UNFCCC's financial mechanism that provides funding to promote mitigation and adaptation to climate change. The IDB is accredited by the GCF to manage these resources. The framework for this relationship is established in the AMA approved by the IDB Board (GN-2895, Resolution DE-31/17). In addition, the FAA to be agreed between the IDB and the GCF will establish terms and conditions specific to this program and shall be signed prior to the signing of the loan contract.

[43] GCF grant resources will be complemented by additional funding from ATN/CF-15571-RG LAC Green Finance Program to Mobilize Private Investment in mitigation actions and low-carbon and Sustainable Business Models through NDBs as well as in-kind contributions from AFD and the VMME, for the TC PR-T1249 and PR-T1257, respectively. The TC support follows similar experiences already implemented by NDBs (see ¶1.20 and Energy Savings Insurance).

standardization and labeling measures, and the development of draft policy instruments that promote EE for government consideration.

1.16 By increasing access by SMEs to medium and long-term financing, the program will enable the development of increased investment in EE in the short to medium term. In the longer term, the program aims to encourage a transformation in SME industrial practices, by demonstrating EE economic and financial viability for the private sector with the effective implementation of a diversified portfolio of subprojects. The instruments described will also promote a higher integration of IFIs to this market as they provide risk mitigation mechanisms for them to introduce into a new line of financing. A demonstration effect with IFIs can contribute to transforming the local climate finance market in the long term, contributing further to develop projects that reduce consumption of energy and non-sustainable biomass, avoiding future GHG emissions and forest degradation.

1.17 **Magnitude of resources needed.** According to the *Prospectiva Energética 2013-2040 (ELO#12)*, in a scenario in which the core of the PND and National Energy Efficiency Plan policies (see ¶1.3 and ¶1.7) are effectively implemented, Paraguay's energy savings potential (accumulated over the period 2013-2040) resulting from the implementation of EE measures, is equivalent to four times the energy consumption in the country in 2013 (4,761 Thousand Tonnes of Oil Equivalent-ktoe). This represents a savings potential of some 221,481.72 Gigawatt Hour (GWh) over the 27-year period, which could be equivalent to total investments of some US$4 billion.[44] Based on this figure, we can obtain an approximation of the average investment needs per year (US$148 million) and estimate that the resources from the program (US$40 million, expected to finance EE projects over a 5-year period) would represent about 5% of financing required to tap EE potential in the next five years.

1.18 More specifically, the estimated potential for viable EE investment in Paraguay in the short to medium term is supported by an analysis of opportunities in specific high-potential subsectors, carried out as input for the program.[45] According to this study, significant potential for EE (US$66.5 million potential demand for feasible investment) was identified in the industrial sector of Paraguay, linked to the replacement of equipment that is outdated, obsolete and inefficient (most of which is over 10 years old) and, in some cases, the substitution of energy sources, incorporating electricity as a replacement for non-renewable biomass. This analysis conservatively assumes that sectors included in the demand will be only those with higher potential for saving, and hence higher investment appetite. However, the program aims to remain open to all EE technologies and SME subsectors, and therefore the actual demand for credit is potentially higher.[46]

1.19 The use of standardized mechanisms and financial channels with extensive reach (see ¶1.15) via the participation of AFD (see ¶1.14) will facilitate the scaling up the

[44] Using the IEA unit converter for energy and considering a cost of US$18.5 per avoided Megawatt hour (MWh) (*Associação Brasileira das Empresas de Serviços de Conservação de Energia*, 2015).

[45] A market study (Carlino et al (2017) has shown potential demand for credit for EE improvements in SMEs, in subsectors such as brick fabrication, sugar mills and agroindustry. In selecting the target sectors for the study, several factors were taken into account, including participation in GDP, relevant value chains for Paraguay, impact on generating positive foreign trade and job creation. See also *Producción y Consumo de Biomasa Solida en Paraguay*, VMME and GIZ, 2013.

[46] For instance, a recent study (Briano et al 2017) indicates a potential equivalent to around US$3 billion only considering investments in efficiency improvements in motors and ovens in Paraguay.

program. The intervention can also be replicated in the commercial sector, or in other countries of the region with similar characteristics of their financial systems.

1.20 **Lessons learned.** This is the first time a dedicated financing line for SME investments in EE is developed in Paraguay. The program applies the Energy Savings Insurance (ESI) model experience of IDB with NDBs, which has been piloted successfully in countries including Colombia and Mexico (loans 2983/TC-CO and 3335/OC-ME, respectively, and the TC programs that support these loans). Another program under preparation using the ESI model has been already approved previously by the GCF Board for El Salvador (ES-L1132 and ES-T1258). A number of existing case studies, as well as the Bank's previous experience in the development of long-term financing solutions for investment in sustainable power generation and EE via public development banks, have proven viable and effective with a number of operations in the region.[47] The intermediation structure has a strong focus on maximizing the leverage of public and donor resources. A need to support NDBs efforts in establishing standard methods for building a portfolio and assessing the risks of these projects has been identified, among both project developers and lenders, to maximize their positive impact and minimize conflicts. In this sense, complementary TC activities (PR-T1249) have been designed incorporating these learnings and including third-party expert support, which will be approved and implemented in addition to this program (see ¶1.25). Moreover, the Bank's experience with financial intermediaries in the RE sector can be useful to better define AFD's own strategies and continuing these efforts and experience may improve its ability to execute and develop more innovative and efficient structures in the future. Given the: (i) program's proposed financial intermediation mechanism; (ii) its sectorial scope on EE in SMEs; (iii) its implications to promote and monitor GHG emission reductions and energy savings; and (iv) the provision of lessons learnt to strengthen the enabling environment for EE investments, the preparation and supervision of the program is being developed and coordinated jointly by the teams of the Connectivity, Markets and Finance Division (IFD/CMF), the Energy Division (INE/ENE), and the Climate Change and Sustainability Division (CSD/CCS) (triple booking).

1.21 **Strategic alignment.** The program is aligned with the objectives of promoting investment financing through the financial system and enhancing the productivity and competitiveness of firms of the IDB Country Strategy for Paraguay (2014-2018) (GN-2769). The operation is consistent with the Update to the Institutional Strategy (UIS) 2010-2020 (AB-3008) and is aligned with the challenge of productivity and innovation as it promotes access to finance by SMEs, and with the cross-cutting theme of Climate Change and Environmental Sustainability as results in the deduction of GHG emissions. The program is also consistent with Bank's priorities as set out in its Integrated Strategy for Climate Change Adaptation and Mitigation, and Sustainable and Renewable Energy (GN-2609-1) and is aligned with the Support to SMEs and Financial Access/Supervision Sector Framework Document (GN-2768-7), the Institutions for Growth and Social Welfare Strategy (GN-2587-2), and the Sustainable Infrastructure for Competitiveness and

---

[47] In Mexico, see loans under the CCLIP ME-X1010 with *Nacional Financiera,* and loan 3563/OC-ME with *Banco Nacional de Comercio Exterior* (BANCOMEXT). In Uruguay, see operation 3396/OC-UR. In Colombia, see GRT/TC-15613-CO with *Banco de Comercio Exterior de Colombia S.A.* (BANCOLDEX). See also, De Olloqui, F., *Bancos públicos de desarrollo: ¿Hacia un nuevo paradigma?* IDB, 2013; Deason, J., Varadarajan, U., and Levi, P., Getting the most from your green: An approach to using public money effectively through green banks and another low-carbon financing. Climate Policy Initiative, 2015.

Inclusive Growth Strategy (GN-2710-5). The operation is included in the Operational Program Report for 2018 (GN-2915).

1.22 According to the joint Multilateral Development Bank´s approach on climate finance tracking, an estimated 100% of total IDB funding for this project is invested in climate change mitigation activities and will contribute to the IDBG's climate finance goal of 30% of operational approvals by year's end 2020.

1.23 The program is also aligned with Paraguay's PND, the National Energy Policy, the National Energy Efficiency Plan, the National Climate Change Plan (Mitigation Strategy) and the country's NDCs[48] (see ¶1.3 to ¶1.8), as EE is included among the strategic areas under those policy guidelines.

B. Objectives, Components and Cost

1.24 The general objective of the program is to promote EE investments by SMEs in Paraguay, improving their productivity in the long-term. The specific objectives are: (i) to increase access to medium and long-term finance for EE investment projects by SMEs; and (ii) to reduce GHG emissions, supporting the achievement of the country's climate change goals.

1.25 The proposed program consists of a global credit loan operation under a single component to be executed by AFD, development bank of Paraguay. AFD will use GCF reimbursable resources, channeled by the IDB, along with its own resources to provide long-term finance via its network of accredited IFIs. IFIs will on-lend funds to EE projects by SMEs through subloans (see Operation Flow Chart (ELO#2)). Additional US$3 million non-reimbursable resources from the GCF will be used for TC activities to: (i) reduce SMEs and IFI perceived risks associated to EE investments; (ii) support SMEs and technology providers in developing bankable subprojects; and (iii) promote energy policy enabling environment for EE investments (see ¶1.15).

1.26 Subloans will be provided to end borrowers through AFD accredited IFIs,[49] on a first-come-first-served basis, seeking to encourage their participation in financing these investments in the future. Subprojects to be financed will be deemed eligible based on conditions established in the Operating Regulations (OR), [50] to be agreed between the IDB and AFD, consistent with AFD's operational policies and with IDB policies and procedures, including legal, financial, environmental, social and

[48] The IDB is preparing two projects for the GCF as part of its broad strategy to assist Paraguay to achieve its NDC targets. Support will be made through investments in: (i) EE for the industrial sector (this project proposal); and (ii) resilience to climate change in depressed urban areas of Asuncion. The latter project is in the preparation phase. These actions are prioritized in Paraguay´s NDC, which commits GHG emission reductions of at least 20% compared to the business as usual scenario by 2030. Per the above approach, a separate Funding Proposal will be submitted for an adaptation program focusing on riverside and urban development resiliency in Asuncion's historical downtown district.

[49] AFD accredits IFIs for lending annually by assessing their financial and institutional risk. AFD's accredited IFIs are supervised by the Central Bank and include 14 banks and 8 finance companies (see AFD-IFIS Habilit*adas*). Participant IFIs will request rediscounting of expenses to AFD, based on a portfolio of subprojects undertaken that meet the conditions of the OR. The IDB shall recognize all eligible expenditures in order to proceed with disbursements to AFD.

[50] Eligible EE projects will consist of efficiency improvements in industrial processes, including equipment replacement, energy substitution and cogeneration. For a project to be eligible, the beneficiary must be a SME and it must be able to demonstrate energy savings. No projects with an "A" or "B" environmental and social risk classification will be financed. The program is strictly conditioned to these eligibility criteria, as established in the program's OR.

technical requirements for each individual subproject, following local norms and legislation (see ¶3.5). Although the program does not pre-establish specific amounts to be allocated for each type of project (by subsector or technology),[51] it is expected that the majority of the resources (around 85%) will be used in efficiency measures in equipment without changing the energy source (mainly firewood), while the remaining funds (15%) will go to modernization by technologies involving substitution of biomass energy source with electricity.[52] From a demand perspective, appetite for investing in EE is determined not only by the cost of energy, but also by potential productivity gains that SMEs expect to obtain from these technological changes.

1.27 **Subborrowers and beneficiaries.** The end borrowers and beneficiaries of the program will be industrial SMEs investing in EE projects.[53] Paraguayan population will indirectly benefit from positive externalities associated with the environmental and economic impacts of the program, such as reduction in firewood consumption and emissions and job creation.[54] The program also entails indirect benefits for other stakeholders linked to the EE market, such as technology and service providers. In addition, even though it is not a focus of the program, an indirect positive co-benefit is expected in terms of gender, as a result of both the marketing strategy and the capacity building plan (included in the TC activities in the complementary program, PR-T1249) that will enable women-owned and women-led SMEs to benefit from loans offered by the program (see: Gender Assessment and Gender Action Plan (ELO#15)).[55]

---

[51] The program does not establish limits per individual loan either. On account of the nature of the EE sector, in which types of equipment and activity of beneficiary projects may vary widely, size of projects to be financed is unknown ex ante and setting a cap may discriminate projects that otherwise comply with all eligibility requirements and may produce important outcomes. However, the credit line is conditioned on having SMEs as beneficiaries, and loan size will hence indirectly be limited to the size of debt they can carry. While a potential pipeline has been identified and used for program projections in terms of disbursements and results, the program will work to generate this demand and it is not considered convenient to limit the size of individual loans further than conditioning its eligibility to SME beneficiaries.

[52] A change to electricity as energy source strongly depends on the ratio between firewood and electricity prices, which in the short to medium term (2-3 years) may remain unfavorable to electricity. Given that subloans will be subject to the financial viability of each subproject, it is expected that earlier stages of the program will see financing focused on firewood equipment improvements without changing the energy source. All the same, the program will seek to facilitate a transition to electric equipment later during its execution and in the longer term.

[53] The program will use firm size definition as per the definition of economic unit under the framework of the *Censo Económico Nacional* and AFD policies and regulations firms with up to 50 employees and income up to PYG2 billion, including microenterprises (PYG500 million in turnover and up to 10 employees). This definition is consistent with AFD policies and regulations, which defines SMEs as firms with annual sales of up to PYG15 billion. In some particular subsectors with high potential, such as the sugar industry subsector, eligible firms may be larger in size. Whereas the analyses related to the potential demand and results of the program are based on an indicative set of SMEs and technologies, the program remains open to other EE technologies and industrial SMEs subsectors. The origination of innovative financial and non-financial instruments will allow for the introduction of various EE technologies (boilers, furnaces, electric motors, and ancillary equipment). These conditions will be reflected in the program's OR.

[54] It is estimated that every US$1 million investment in EE improvements supports around 20 jobs in the United States economy, including direct, indirect and induced jobs, see Fact Sheet: Jobs in Renewable Energy and Energy Efficiency (2014). In the US, HVAC appliances have become the largest job provider in the EE industry, see Fact Sheet: Jobs in Renewable Energy and Energy Efficiency (2017). No specific data for Paraguay is available.

[55] In line with this, and given the importance of the cross-cutting element of gender and equality in IDB operations and the existing gender gaps with regards to access to finance, AFD will be requested to monitor the share of beneficiary SME that are led/owned by women in addition to the indicators committed in the Results Matrix (see ¶1.28).

C. Key Results Indicators

1.28 At the output and outcome levels, the indicators that will be measured are: (i) EE credit line used; (ii) number of SMEs that finance EE projects with funds from the program; (iii) financing from third parties mobilized by the program; (iv) average maturity of subloans; (v) annual energy cost savings from subprojects financed by the program; and (vi) average GHG emissions reductions from subprojects financed by the program. At the impact level, the main indicator is energy intensity to GDP (see Annex II).

1.29 **Economic evaluation.** The proposal is supported by an Economic Analysis (ELO#1), which quantifies ex ante the net economic benefits of the program. Costs and benefits are quantified for the scenarios with and without the program, using an assumed portfolio of subprojects supported by the program and a counterfactual scenario in which EE measures are not deployed due to lack of financing. Environmental externalities are also accounted for, based on a valuation of GHG emission reductions. In addition, a sensitivity analysis is carried out on several key criteria, including price of energy source, Operating and Maintenance costs, subproject mix and a scenario of unsuccessful development of some of the potential projects. Using a 12% discount rate, the program shows a positive net present value of US$54.90 million and an Internal Rate of Return (IRR) of 40.6% and remains robust when stressing some important variables in the sensitivity tests (see Economic Analysis).

1.30 An indicative program resource distribution was used for assumptions associated to the Economic Analysis, which allow us to obtain an aggregated economic value for the program. However, actual results may differ depending on real demand once the program is implemented, due to the different nature of specific technologies and subsectors. The Monitoring and Evaluation Plan proposes follow up measures to update program values as it advances in its implementation (see ¶3.14).

II. FINANCING STRUCTURE AND MAIN RISKS

A. Financing Instruments

2.1 The program will use US$20 million reimbursable resources from the GCF, cofinanced with a local counterpart of US$20 million from AFD. AFD's own resources may include those available under IDB Loans to support financing of productive investments by SMEs, which may also include EE investments.[56] AFD will use GCF resources to diversify and lengthen its funding sources, and better responding to the financing needs of eligible IFIs and final beneficiaries. The total amount of program resources will be channeled to end borrowers by AFD through its network of accredited first-tier IFIs (see ¶1.25-1.26). AFD's financial obligations, under the Bank's loan funded with GCF reimbursable resources, will be guaranteed by the Republic of Paraguay (see ¶3.1).

---

[56] Operations 3354/OC-PR and 3616/OC-PR seek to provide medium and long-term financing to SMEs for productive investments, which may include EE investments to strengthen the competitiveness of eligible firms through the financing of investment projects for: (i) innovation and technological development; and (ii) the mitigation of environmental impacts. The GCF will also provide US$3 million on a non-reimbursable basis for technical assistance in support of this program (PR-T1149 and PR-T1257).

2.2 Owing to the concessional terms of GCF resources, the program shall provide a financial instrument that is adequate to the characteristics of eligible subprojects. By using GCF resources, AFD will increase its ability to provide a longer tenor consistent with EE projects' costs, risks and cash flow profiles, which will contribute to achieving the expected returns to make these ventures successful.[57]

2.3 As mentioned in ¶1.25, the program consists of an investment loan under the Global Credit modality, to be disbursed in a period of five years (see table 1). The investment loan, under a single component, is considered an effective instrument for this intervention because it provides a flexible financing framework through which AFD can effectively disburse resources for eligible expenses (see ¶3.6) upon demand. The proposed intermediation structure allows the program to benefit from the AFD's extensive experience and association with local financial actors, increasing the scope of firms that can access credit and broadening the set of EE measures that are promoted.

Table 1. Disbursment Projection
(Millions of US Dollars)[58]

Single Component-Financing	Year I	Year II	Year III	Year IV	Year V	Total
BID	0.9	1.7	4.9	6.3	6.3	20.0
Local	0.9	1.7	4.9	6.3	6.3	20.0
Total	1.7	3.4	9.7	12.6	12.6	40.0

2.4 The IDB has proven experience working with AFD, having carried out several prior programs successfully, including operations 1968/BL-PR, 2150/BL-PR, 2639/BL-PR, 2640/OC-PR and 3354/OC-PR. In the last two years, IDB has been providing TC support to AFD to strengthen its capacity in developing and promoting green finance (ATN/OC-13944-RG and ATN/CF-15571-RG). The complementary TC activities (see ¶1.25) will further support AFD in strengthening its capacities.

B. Environmental and Social Safeguard Risks

2.5 **Environmental and social risks.** Due to its financial intermediation structure and following Directive B.13 of the Environment and Safeguards Compliance Policy (OP-703), the program does not require classification. Based on the E&S due diligence conclusions and the intended use of proceeds, it is classified as low-risk (FI-3). The program will be managed through the implementation of an Environmental and Social Risks Management System (ESMS), agreed between the IDB and AFD, to be fully integrated in the program's OR. Only sub-projects categorized as environmental risk "C" will be eligible for the program. Nevertheless, the ESMS provides for a framework for the proper assessment, management and monitoring of individual sub-projects and overall portfolio, in accordance with IDB environmental safeguards policies. The ESMS also integrates all applicable local systems and norms.

---

[57] The program will be structured as the AFD existing financing lines, which offer improved terms with respect to the local financial system. Over its nearly 11 years of operation, AFD has succeeded in becoming the main source of long-term financing in the Paraguayan financial system.

[58] Loan resources will be disbursed once available in accordance with the requirements set forth in the FFA and pursuant to the provisions set forth in the Loan Contract entered into between the Borrower and the Bank.

C. Other Key Issues and Risks

2.6 **Sustainability of the program.** Long-term sustainability of the program is ensured by helping relevant market actors (i.e. SMEs and IFIs) refine their risk perception of EE investments and adequately assess the impact of EE savings in cash flows and investment returns. With program support, AFD will develop instruments that can spur private EE investments in the long run. Once program execution is complete, successful implementation of subprojects may foster replication of the business model, further engagement of IFIs and additional private sector investments.

III. IMPLEMENTATION AND MANAGEMENT PLAN

A. Summary of Implementation Arrangements

3.1 The borrower and Executing Agency of the program will be the AFD, with the Republic of Paraguay serving as guarantor. The guarantee of the Republic of Paraguay will be solely limited to AFD financial obligations under the loan (including repayment of principal, payment of interest and other financial charges); and will not cover performance obligations or local counterpart contributions. The Bank's "Policy on Guarantees Required from the Borrower" (OP-303, GP-104-2) indicates that in loans to public sector development agencies and other national decentralized bodies, the government's joint and several guarantees are required. Such guarantee includes the monetary obligations of a loan, including repayment of principal, payment of interest and fees, and the provision of the local contribution required for the project (local counterpart), as well as compliance with the objectives and purpose of the loan (performance obligations). This policy does not apply with regard to loans to development banks or agencies that have ample financial capacity to meet the obligations they would assume towards the Bank, provided that their charters include the provision that all the operations they enter into as borrowers are covered by a joint and several or subsidiary guarantee of the nation. Such guarantee is not provided in AFD's charter. The Government of Paraguay has explained that it can only guarantee AFD's monetary obligations associated with service of the loan (repayment of principal, as well as payment of interests and fees), thus an exception to GP-104-2 "Guarantees required from the borrower" (OP-303) is requested so that the sovereign guarantee from the Republic of Paraguay extends only to the monetary obligations of the loan, including repayment of principal, payment of interest and fees.[59]

3.2 AFD is a second-tier bank that promotes economic development and job creation. It is Paraguay's only channel for public financing (from or guaranteed by the government) to first-tier IFIs, cooperatives and other financial entities created by

[59] Information provided by the legal department of treasury of the Ministry of Finance based on law No. 1,535 of "State financial administration". It should be noted that the Board of Executive Directors has authorized partial exceptions of the same scope to the aforementioned policy in other operations, such as 2236/OC-BR (2010), 3866/OC-BR (2017), 3271/OC-ES (2014), 4439/OC-CO (2017). AFD is a financially autonomous and solvent entity, with a wide financial and execution capacity in terms of the obligations it assumes with the Bank. It is therefore considered that this waiver will not affect the risk profile of the operation because it is related only to the implementation obligations of the project, and a full sovereign guarantee is maintained for all financial obligations.

law.[60] AFD also has the authority to transfer technical assistance funds that might be associated with these programs through trust funds created for that purpose and administered by the AFD, acting as trustee. The AFD does not take deposits.

3.3 Between July 2015 and April 2016, AFD approved credits for a total of US$207 million. The funding structure for these loans is composed primarily by bonds (55%), multilateral loans (40%), and retained earnings and capitalizations. AFD currently accounts for only 2% of the Paraguayan financial system assets and given its role and importance as a development institution and the evolving nature of the Paraguayan financial system,[61] there is further room to increase its total assets in order to expand the institution's development impact.

3.4 AFD will implement the program under its current organizational structure and will be responsible for supervising the adequate use of program financial resources and for ensuring the timely provision of human and technical resources, as well as the necessary administrative and control mechanisms, to provide and maintain a transparent and effective administration of the program. AFD will also provide all reports and information needed by the Bank to comply with GCF requirements.

3.5 The provisions governing program execution will be established in the OR agreed between the IDB and AFD. This OR will include specific procedures, conditions and requirements for the use of the funds, including: (i) the eligibility criteria of the beneficiaries (IFIs and SMEs) and activities of the project;[62] (ii) the terms and conditions to be complied by AFD and/or the IFIs when providing the subloans to the SMEs, including those necessary to ensure that Bank financing provided with GCF resources will not be exposed to higher credit risks than those of local counterpart resources; (iii) other parameters, requirements and/or restrictions that govern the use of resources by AFD, and the IFIs and/or SMEs, respectively; (iv) the methodologies to apply the concessionality from Bank financing provided with GCF resources to IFIs and SMEs to ensure that SMEs sufficiently benefit from the project; (v) methodologies to ensure that the ratio of Bank financing and local counterpart will be maintained at 1 : 1 for the portfolio of subloans provided to IFIIFIs or SMEs by AFD over the entire tenor of the Bank loan; (vi) production of audited reports on the financial activities using Bank financing provided with GCF resources, in accordance with relevant financial reporting standards; (vii) a requirement for participating SMEs to source any firewood used during the lifetime of the subloans from certified sustainable sources;[63] (viii) terms for AFD to establish and maintain a system to collect and hold project information necessary for AFD to prepare progress reports and the Bank to prepare the interim and final evaluation reports of the project; and (ix) definition of corrective measures, including measures to prevent access to finance, in case of failure to comply with the OR. Loans with IFIs and eligible end borrower will provide the precise terms

---

[60] According to its mandate, all funding provided to AFD shall be used for: (i) rural development; (ii) credits for microenterprises and SMEs; (iii) business creation and development, with emphasis on SMEs; (iv) exports of goods and services and imports of capital goods, especially for SMEs; (v) development of tourism; (vi) basic infrastructure; and (vii) development of housing and urban programs and other actions aimed at reducing housing deficit.

[61] AFD information from January 2017.

[62] The eligibility criteria included in the OR should be consistent with categories and/or subcategories for energy efficiency and renewable energy as outlined in the Common Principles for Climate Mitigation Finance Tracking developed by the Joint Climate Group of Multilateral Development Banks.

[63] Such sources may include certified firewood generated by the project "Poverty, Reforestation, Energy and Climate Change" to be submitted to the GCF Board for approval and to be implemented by the Food and Agriculture Organization in Paraguay.

and conditions (i.e. maturity, rates and costs) of the financing for each subloan, which will depend on the characteristics of each project, its internal rate of return and its risk profile.

3.6 **Disbursements, eligible expenditures, and administration framework.** Program resources will be committed and disbursed over a period of 60 months (five years) from the effective date of the loan contract. For the purpose of this global credit loan operation it is proposed that the eligible expenditures be the disbursement of program resources from AFD to accredited IFIs, pursuant to the terms of effective subloan agreements for eligible projects. Disbursements will be made by reimbursing AFD for transfers made to the accredited IFIs to eligible subprojects according to the program's OR[64]. However, all the modalities of disbursements of funds available in the Bank´s Policy OI-273-6 are available to the borrower if needed.

3.7 **As a special contractual clause prior to the first disbursement of the loan, AFD shall provide evidence of approval and entry into effect of the OR of the program in terms previously agreed with the Bank.** This condition will allow the executing agency to adapt its internal processes and related documentation to the requirements of this program.[65]

3.8 Cumulative recoveries from the amortization or prepayments of subloans financed with loan resources and that exceed the amounts required to service the loan to the IDB, will be used by AFD to finance new subloans consistent with the program's objectives and the requirements established in the loan agreement and the OR until the loan to IDB has been fully repaid. Use of those resources should continue to be done under the dedicated account established by AFD for the program. AFD will report on the use of those resources on years ten and twenty of loan agreement.

3.9 Financial statements and expenses of the program will be audited annually by an independent auditing firm acceptable to the IDB. Annual audited reports will be presented within 120 days after the end of AFD's fiscal year, and the final audit will be presented 120 days after the date of last disbursement.

3.10 **Procurement of goods and services.** No procurement actions or consultant services are contemplated for the proposed loan. Subborrowers will use market procurement practices.

B. Summary of Arrangements for Monitoring Results

3.11 The program will be monitored with semi-annual reports prepared by the Executing Agency and submitted to the Bank within 60 days following the closing of each calendar semester during the disbursement period of the program (five years), with information that will include, among other aspects to be detailed in the OR, progress in the indicators and fulfillment of the eligibility criteria of the subloans

---

[64] The commitment of resources will be made in four years under AFD´s established agreements with IFIs or agreements with subborrowers and in accordance with the annual disbursement projections informed to the IDB.

[65] The effectiveness of the OR is also required for the GCF to make its first transfer of resources to the Bank for the program.

financed with funds from the GCF.[66] In addition, the Executing Agency shall prepare and send the Bank, which in turn will forward such information to the GCF, non-audited financial reports confirming that: (i) appropriate concessionality is applied to the IFIs and SMEs; (ii) a ratio of 1 : 1 of loan financing from the GCF and AFD for the portfolio of subloans is maintained; and (iii) the use of resources available in the Revolving Account is in compliance with the OR. AFD will send to the Bank the non-audited financial reports annually within 60 days following the closing of each calendar year, starting on the year the first repayment installment of the loan is made and until the loan is fully repaid. As requested by the GCF, the Bank will complement this information with information on the status of principal, repayments, interests and commissions under the loan agreement.

3.12 The program will apply the standard procedures established by the IDB for monitoring and evaluation of investment operations and to satisfy GCF requirements. The evolution of indicators should be periodically reported by AFD to the IDB during program execution, as established in the Monitoring and Evaluation Plan (REL#2) and the OR. These procedures will also be consistent with GCF requirements, to which the IDB will be responsible for periodical reporting.

3.13 AFD will compile and maintain all information, indicators and parameters, including annual plans, midterm review and final evaluation, necessary for the preparation of the Project Completion Report, to be prepared when the operation is fully justified (its status showed in the Convergence System will be CO), and an ex post assessment.

3.14 The evaluation plan considers independent evaluation reports. An interim evaluation will be completed within six months following the second year of implementation of the program and a final evaluation within nine months after the final annual report, using a cost-benefit ex post methodology. This method is appropriate because the relatively small universe of subprojects and the inherently non-random mechanisms that lead to the approval of the best subprojects for financing (applicants are evaluated by IFIs based of specific criteria and conditions) do not allow for a construction of a control group for an experimental or quasi-experimental exercise for the evaluation. The ex post cost benefit analysis can be considered a reassessment of the cost benefit analysis made as part of the program proposal (see ¶1.29), once effective magnitudes related to the subprojects financed are known.

[66] Annually, AFD shall: (i) inform the percentage of the total investments, at a portfolio level, provided from sources other than the Bank financing and local counterpart financing; and (ii) confirm that subloans are compliant with the eligibility criteria established in the OR.

Development Effectiveness Matrix		
Summary		
I. Corporate and Country Priorities		
1. IDB Development Objectives	**Yes**	
Development Challenges & Cross-cutting Themes	**-Productivity and Innovation -Climate Change and Environmental Sustainability**	
Country Development Results Indicators	**-Reduction of emissions with support of IDBG financing (annual million tons CO2 e)* -Micro / small / medium enterprises provided with non-financial support (#)***	
2. Country Development Objectives	**Yes**	
Country Strategy Results Matrix	**GN-2769**	**Promoting investment financing through the financial system and enhance the productivity and competitiveness of firms.**
Country Program Results Matrix	**GN-2915**	**The intervention is included in the 2018 Operational Program.**
Relevance of this project to country development challenges (If not aligned to country strategy or country program)		
II. Development Outcomes - Evaluability		**Evaluable**
3. Evidence-based Assessment & Solution	**7.7**	
3.1 Program Diagnosis	**3.0**	
3.2 Proposed Interventions or Solutions	**1.7**	
3.3 Results Matrix Quality	**3.0**	
4. Ex ante Economic Analysis	**10.0**	
4.1 Program has an ERR/NPV, or key outcomes identified for CEA	**3.0**	
4.2 Identified and Quantified Benefits and Costs	**3.0**	
4.3 Reasonable Assumptions	**1.0**	
4.4 Sensitivity Analysis	**2.0**	
4.5 Consistency with results matrix	**1.0**	
5. Monitoring and Evaluation	**8.5**	
5.1 Monitoring Mechanisms	**2.5**	
5.2 Evaluation Plan	**6.0**	
III. Risks & Mitigation Monitoring Matrix		
Overall risks rate = magnitude of risks*likelihood	**Low**	
Identified risks have been rated for magnitude and likelihood	**Yes**	
Mitigation measures have been identified for major risks	**Yes**	
Mitigation measures have indicators for tracking their implementation	**Yes**	
Environmental & social risk classification	**B.13**	
IV. IDB´s Role - Additionality		
The project relies on the use of country systems		
Fiduciary (VPC/FMP Criteria)	**Yes**	**Financial Management: Budget, Treasury, Accounting and Reporting.**
Non-Fiduciary	**Yes**	**Environmental Assessment National System.**
The IDB's involvement promotes additional improvements of the intended beneficiaries and/or public sector entity in the following dimensions:		
Additional (to project preparation) technical assistance was provided to the public sector entity prior to approval to increase the likelihood of success of the project	**Yes**	**AFD Paraguay has received in the last 4 years technical cooperation from the regional programs RG-T1338 and RG-X1258, which supported the diagnosis of opportunities to finance green MSMEs projects, the human resources capacity to institutionally promote and maintain green finance programs, the development of environmental and social risk management strategies for AFD and workshops on good monitoring and evaluation practices.**

Note: (*) Indicates contribution to the corresponding CRF's Country Development Results Indicator.

In Paraguay, the financial system operates mainly on a short-term horizon (1.55 year terms on average in the banking system). Energy efficiency (EE) projects have longer payback periods and therefore require longer financing terms than are available. Thus, the bias towards short-term credit is itself a barrier for EE initiatives. This is exacerbated by the fact that MSMEs are not familiar with the benefits of this type of projects and until they understand the business case naturally prefer less expensive equipment that is not as efficient. A market study conducted as due diligence for the program shows the vast potential for EE investments in MSMEs that operate in the industrial sector often with equipment that is outdated and inefficient. Combining this with the fact that MSMEs also lack access to long-term finance and frequently cite a lack of financing as a barrier to investment (per the Doing Business Survey) means that there is untapped demand for EE investment in Paraguay. This program will provide financing at longer terms and through Technical Cooperation the program will also catalyze demand for EE projects via the development of risk mitigation and guarantee mechanisms among others. In fact, this credit line earmarked for EE projects is the first of its kind in Paraguay. The Results Matrix adequately captures project benefits such as financial leverage, average loan maturity, and GHG emissions reductions. The economic analysis shows the program has a net benefit to society. At closure, the project will be assessed through an ex-post cost benefit analysis and the M&E plan provides a detailed description of the ex-ante assumptions that will be replaced with realized values.

RESULTS MATRIX

Objective of the program:	The general objective of the program is to promote Energy Efficiency (EE) investments by SMEs in Paraguay, improving their productivity in the long-term. The specific objectives are: (i) to increase access to medium and long-term finance for EE investment projects by SMEs; and (ii) to reduce Greenhouse Gas (GHG) emissions, supporting the achievement of the country's climate change goals.

Indicator	Unit	Base	Y0[1] (2018)	Y1	Y2	Y3	Y4	Y5	Target	Description / Source of verification
OUTPUTS										
Energy efficiency (EE) credit line used	Million US$	0	0	1.7	3.4	9.7	12.6	12.6	40.0	Indicator measures the annual usage of the credit line as established by the program. Annual projections consider that the line is fully operational and ready to use in Y1. **Source:** Annual report on program execution by AFD.
OUTCOMES										
Small and medium enterprises SME that finance EE projects with funds from the program	Number	0	0	14	27	73	93	93	300	Measures number of eligible EE projects implemented by SMEs, aggregated for all technologies **Source:** Annual report on program execution by AFD.
Financing from third parties mobilized by the program	Million US$	0	0	0.2	0.4	1.1	1.4	1.4	4.5	Includes all sources of financing (debt or equity) additional to program resources. Target estimate based on the average total investment required per project and a 90/10 debt to equity ratio. Real values will be monitored and validated with information provided by AFD in periodical reports, which will include detail on sources of financing per individual project. **Source:** Annual report on program execution by AFD.
Average maturity of subloans	Years	5							8	Measures the length of the amortization period for the portfolio of sub projects financed in order to compare with alternative financing sources available

[1] The programming of execution and its corresponding annual products and results consider local mandatory procedures that have an impact in the actual launch date of the program after the signing of the contract (expected in 2018). In particular, an approval by congress is required, which may take up to one year. For this reason, a Y0 is being included in the matrix, during which no reporting of products is expected.

Indicator	Unit	Base	Y0[1] (2018)	Y1	Y2	Y3	Y4	Y5	Target	Description / Source of verification
										(market average and/or AFD financing without program resources). **Source:** Annual report on program execution by AFD
Annual energy savings from subprojects financed by the program (accumulated)	toe	0	0	0.0	0.001	0.004	0.011	0.02	0.036	Indicator shows accumulated annual savings from all beneficiary subprojects in the portfolio financed by the program. Final target was estimated based on an average consumption of beneficiary firms and efficiency ratios of EE systems installed and includes accumulated savings of all projects financed.[2] As sources may include electricity and firewood, energy measures (consumption and savings) are standardized by using tons of oil equivalent (toe) as unit. *Energy savings = energy consumed by beneficiary firms * [1 – (efficiency of system installed – efficiency of original system)]* **Source:** Annual report on program execution by AFD.
Average annual Greenhouse Gas (GHG) emissions reductions from sub projects financed by the program (accumulated)	TM CO_2e	0	0	0	5,476	16,427	48,259	90,021	131,784	Indicator is based on the accumulated CO_2e emissions avoided by EE energy savings produced in subprojects financed. Final target was estimated based on envisaged EE savings conversion factors from: (i) default emission factor for stationary combustion of wood/wood waste in manufacturing industries and construction from the 2006 IPCC Guidelines for National Greenhouse Gas Inventories (112,000 kg of CO_2 per TJ); and (ii) Latin America's average conversion factor for electricity

2 Target value differs from Y5 value, as savings from those projects financed in Y5 can only be accounted for in Y6, which is not included in the matrix. A projection for projects financed in Y5 is added to the target.

Indicator	Unit	Base	Y0[1] (2018)	Y1	Y2	Y3	Y4	Y5	Target	Description / Source of verification
										(0.188 kg CO_2 per kWh) from the List of international emission conversion factors for electricity.[3] *GHG emissions = energy consumption x CO_2 emission factor* **Source:** Annual report on program execution by AFD and conversion factor from internationally accepted GHG inventory guidelines.
IMPACTS										
Energy intensity in the industrial sector	toe/million PGY	0.38[4]						0.29	0.29	Measures the quantity of energy required to generate PGY 1 million of output in the industrial sector. Target was established considering the falling trend of this ratio since 2000, when it was over 0.50. **Source:** Official figures from the *Base de Indicadores de Eficiencia Energética* (BIIE) and the *Balance Energético Nacional*

[3] Target value differs from Y5 value, as savings from those projects financed in Y5 can only be accounted for in Y6, which is not included in the matrix. A projection for projects financed in Y5 is added to the target.

[4] Last available data from 2011.

FIDUCIARY ARRANGEMENTS

COUNTRY:	Republic of Paraguay
PROJECT No.	PR-L1146
NAME:	Promoting Private Sector Investments in Energy Efficiency in the Industrial Sector in Paraguay
EXECUTING AGENCY:	*Agencia Financiera de Desarrollo* (AFD)
PREPARED BY:	Fernando Glasman, Bruno Candia y Jorge Luis González (FMP/CPR)

I. EXECUTIVE SUMMARY

1.1 The evaluation of the fiduciary management of the proposed project was carried out based on the Proposed Program, in which the objective of the program is defined as the promotion of EE investments by Small and Medium Enterprises (SMEs) in Paraguay, improving their productivity in the long-term. The successful implementation of the financed projects will contribute in the reduction of Greenhouse Gas (GHG) emissions, support the achievement of the country's climate change objectives, and improve the productivity of the SMEs in the long term.

1.2 The *Agencia Financiera de Desarrollo* (AFD) is the only second-tier public bank created by Law 2640/05 that offers the public its credit products exclusively through banks, financial institutions, and authorized credit unions. It does not grant credit directly to the final beneficiaries. AFD's experience in this type of operation underscores a positive track record in the management of the funds granted and, accordingly, confers the sufficient fiduciary reliability required.

1.3 The project includes financing of the GCM funds.

II. FIDUCIARY CONTEXT OF THE EXECUTING AGENCY

2.1 As executor, AFD has adequate systems to manage the trust funds allocated to intermediation loans. This has been confirmed through technical and financial visits, Audited Financial Statements (AFS) of previous programs, and the last official report of the standard internal audit model corresponding to the first semester of the 2017 period, which have verified that it has an adequate level of internal control.

III. ASSESSMENT OF FIDUCIARY RISK AND MITIGATION ACTIONS

3.1 Given the successful experience of the AFD in executing IDB operations, the supervision level required for compliance with the Operating Regulations will be the usual one for the normal operation of this program.

IV. ASPECTS TO BE CONSIDERED IN SPECIAL STIPULATIONS TO THE CONTRACTS

4.1 In order to speed up the contract negotiations, following are those agreements and requirements that must be considered in the special stipulations:

a. To determine the equivalence in dollars of an expenditure made in local currency with loan resources, the same rate of exchange used for the conversion into local currency of the funds disbursed in American dollars will be applied. For requests regarding expenditure reimbursement charged to the loan and acceptance of expenditures charged to the local counterpart, the exchange rate in effect on the date the request was presented to the Bank will be applied.

b. The project's financial statements will be of an annual nature at the closing of the financial year of the program and its presentation 120 days after the closing date and a final one 120 days after the date of the last disbursement.

c. For the financial statements, the auditing firms that produce such reports must be acceptable to the Bank prior to the preparation of the same audit reports.

d. The Bank may request an assurance audit when it deems appropriate.

e. In all subloans granted with loan funds, conditions must be included to guarantee that the subborrowing entities commit to comply with the Bank policies related to banned practices, as well as environmental and social safeguards.

V. AGREEMENTS AND REQUIREMENTS FOR THE EXECUTION OF PROCUREMENT

5.1 The executor will not perform any procurement in this operation.

VI. AGREEMENTS AND REQUIREMENTS FOR THE FINANCIAL EXECUTION

A. Financial Management

1. Programming and Budget

6.1 Being an autonomous entity, AFD has available resources granted by the State for its operation; however, their execution is discretionary tailored to the own needs of AFD.

6.2 Due to its nature, AFD is a legal entity governed by public law, autonomous and autarkic according to Law No. 3330/07 "that modifies Articles 1, 3, 5, 6 and 14 of Law No. 2640/05". Its core mission is to promote economic growth and job generation through the channeling of medium- and long-term financing to the private sector through banks, financial institutions and credit unions (Intermediary Financial Institutions - IFI).

6.3 Programming, management and execution of the budget will be undertaken by the Administration and Finance Management Office, under the zero-based budgeting system; likewise, its planning system is aligned with the annual and multi-year placement plans. It should also be taken into account that the availability of the initial project resources will be subject to the ratification of the project by the National Congress before providing such budget.

2. Accounting and Information Systems

6.4 The country uses the modified cash accounting principle; however, cash basis is used for the accountability process of IDB-financed projects.

6.5 **Information systems.** AFD will have access to the Integrated Finance Administration System (SIAF, in Spanish). The national systems do not issue the necessary reports for the Bank, which are prepared through different systems; however, AFD has an accounting system that allows the migration of data by means of an interface and an equivalent account relationship.

6.6 **Disbursements and cash flow.** Program disbursements will be carried out through advances of funds or reimbursements, which must meet the conditions established in the loan contract and the program's operational bylaws for acceptance. In case of contradictions between them, the provisions established in the contract will prevail.

6.7 **Exchange rate.** The agreed exchange rate with the executor for accountability purposes will be monetization. In the case of reimbursements, it will be the exchange rate used at the time of preparation of the request by the executor.

6.8 **Internal control and internal audit.** With regard to internal control, the last *Modelo Estándar de Control Interno del Paraguay* (MECIP) report, 1st semester of 2017, published by the General Audit Office of the Executive Power, determined a level of satisfactory performance.

6.9 **External control and reports.** The executor must present annual audit reports of the program, carried out by an independent auditing firm acceptable to the Bank, in accordance with the terms of reference previously approved by the Bank. The AFS of the project include: cash flow statement, cumulative investments statement, the notes of said AFS, and statement from the Project Management (PM). The audit report will include the evaluation of the internal control system.

6.10 The project will require the selection of an Independent Auditing Firm at the eligible level.

6.11 The external audits will be covered with funds from the executor, estimated at US$250,000 for the five years foreseen for the execution of the loan.

6.12 **Financial supervision plan.** The financial supervision may be adjusted according to the execution of the project and the audit reports.

Table 1. Financial Supervision Plan

Nature/Scope	Frequency
Financial audit and AFS presentation	Annual
Review of disbursement requests and attached reports	2/3 per year
Inspection visit/analysis of internal control and control environment in the PM	Annual

PROMOTING PRIVATE SECTOR INVESTMENTS IN ENERGY EFFICIENCY IN THE INDUSTRIAL SECTOR IN PARAGUAY

PR-L1146

CERTIFICATION

The Grants and Co-Financing Management Unit (ORP/GCM) received the commitment of the **Green Climate Fund (GRN)** for up to US$20,000,000 as confirmed by the Fund Coordinator, Brady Martin (ORP/GCM), May 15, 2018. An operation financed by the GRN receives a conditional certification given the circumstances of the Accreditation Master Agreement between GRN and the IDB. As such, a commitment by the GRN does not have validity until the Funded Activity Agreement (FAA) between the IDB and the GRN is agreed upon and signed for an operation. Therefore, this certification will remain conditional until the FAA is signed and effective.

Original Signed	May 18,2018
Sonia M. Rivera Chief Grants and Co-Financing Management Unit ORP/GCM	Date

DOCUMENT OF THE INTER-AMERICAN DEVELOPMENT BANK

PROPOSED RESOLUTION DE-___/18

Paraguay. Loan ____/__-PR to Agencia Financiera de Desarrollo
Promoting Private Sector Investments in Energy Efficiency
in the Industrial Sector in Paraguay

The Board of Executive Directors

RESOLVES:

1. That the President of the Bank, or such representative as he shall designate, is authorized, in the name and on behalf of the Bank, acting as Accredited Entity of the Green Climate Fund (“GCF”), to enter into such contract or contracts as may be necessary with the Agencia Financiera de Desarrollo, as Borrower, and with the Republic of Paraguay, as Guarantor, for the purpose of granting the former a financing to cooperate in the execution of a program to promote private sector investments in energy efficiency in the industrial sector in Paraguay (the “Program”). Such financing will be for the amount of up to US$20,000,000 from the resources of the GCF and will be subject to the Financial Terms and Conditions and the Special Contractual Conditions of the Project Summary of the Loan Proposal.

2. That the President of the Bank, or such representative as he shall designate, is authorized, in the name and on behalf of the Bank, to enter into such agreement or agreements with the GCF as may be necessary to receive and administer resources from the GCF for the purposes of the Program and to adopt any other measures as may be pertinent for execution of said agreement or agreements.

3. That the authorization granted in paragraph 1 above will be effective once the corresponding agreement or agreements to which reference is made in paragraph 2 of this Resolution have entered into effect.

(Adopted on ___ __________ 2018)

LEG/SGO/CSC/EZSHARE-746870777-7569
Pipeline No. PR-L1146