

DOCUMENT OF THE INTER-AMERICAN DEVELOPMENT BANK

COLOMBIA

**RENEWABLE ENERGY FINANCING PROGRAM FOR THE
NON-INTERCONNECTED ZONES**

(CO-L1161)

PROJECT PROFILE

This document was prepared by the project team consisting of: Maria Netto, IFD/CMF, Team Leader; Jose Ramon Gomez, ENE/CCO, Alternate Team Leader; Javier Cuervo, INE/ENE, Jose Juan Gomes, Gloria Lugo, Maria Margarita Cabrera, Leticia Riquelme, Sebastian Vargas, Alejandro Tamola and Annabella Gaggero, IFD/CMF; Alvaro Concha, CMF/CCO; Claudio Alatorre and Veronica Valencia, INE/CCS; Colin McKee, VPS/ESG; Claudia Cardenas and Gabriele del Monte, FMP/CCO; and Escarlata Baza, LEG/SGO.

Under the Access to Information Policy, this document is subject to Public Disclosure.

PROJECT PROFILE

COLOMBIA

I. BASIC DATA

Project Name:	Renewable Energy Financing Program for the Non-Interconnected Zones		
Project Number:	CO-L1161		
Project Team:	Maria Netto, IFD/CMF, Team Leader; Jose Ramon Gomez, ENE/CCO, Alternate Team Leader; Javier Cuervo, INE/ENE, Jose Juan Gomes, Gloria Lugo, Maria Margarita Cabrera, Leticia Riquelme, Sebastian Vargas, Alejandro Tamola and Annabella Gaggero, IFD/CMF; Alvaro Concha, CMF/CCO; Claudio Alatorre and Veronica Valencia, INE/CCS; Colin McKee, VPS/ESG; Claudia Cardenas and Gabriele del Monte, FMP/CCO; and Escarlata Baza, LEG/SGO.		
Borrower:	Banco de Comercio Exterior de Colombia S.A. (BANCOLDEX)		
Guarantor	Republic of Colombia ¹		
Executing Agency:	BANCOLDEX		
Financial Plan:	IDB (Clean Technology Fund) ^{2,3} :	US\$	9.265 million
	Total:	US\$	9.265 million
Safeguards:	Policies triggered:	B.01, B.02, B.03, B.07, B.13 and B.17	
	Classification:	Not required (B.13)	

II. GENERAL JUSTIFICATION AND OBJECTIVES

- 2.1 **The Colombian Non-Interconnected Zones (ZNI)** represent two-thirds of the national territory with partial or no electricity coverage in which the limited energy services available are generated under a highly subsidized business model based on traditional, environmentally unfriendly technologies.
- 2.2 **ZNI: an opportunity to expand coverage and improve the quality of electricity services.** While Colombia has a high average electricity coverage index (96.1%⁴), the ZNIs are not served by the Interconnected System (SIN). The ZNIs comprise a population of 1.83 million inhabitants spread across 1,565

¹ The Republic of Colombia will only guarantee all financial obligations; therefore it is proposed that a partial waiver to the Bank's policy on "Guarantees required from Borrower" (OP-303) be approved by the Board of Executive Directors.

² This financing will be subject to prior approval by the Trust Fund Committee (TFC) of the Clean Technology Fund (CTF). Once obtained, the Bank will proceed with the approval of the program in accordance with its policies and procedures. The CTF has allocated under its Dedicated Private Sector Program (DPSP) US\$10 million to support private investments in RE minigrids in Colombia.

³ Individual RE investment projects to be funded with program resources will be complemented with financing of similar investment projects funded from resources (for up to US\$10 million) of the third loan operation (2949/OC-CO, US\$200 million) of an existing CCLIP (CO-X1007).

⁴ [Indicative Plan for the Expansion of Electricity Coverage 2013- 2017](#) (PIEC), Planning Unit on Mining and Energy (UPME).

localities, most of which are in rural areas (89%). Only 34% of the ZNI population has access to electricity services⁵, for an average of 9.2 hours in the capitals of departments and municipalities, and of 5.1 hours in smaller localities⁶ ([see Figure 1](#)).

- 2.3 **The current delivery of electricity services in the ZNIs: A subsidized business model.** The electricity service is provided by 94 operators⁷, of which half are private or mixed capital operators and the other half municipalities. Often, the same operators generate, distribute and commercialize electricity. Currently, these operators depend heavily on subsidies⁸, which cover the difference between the lower tariffs actually charged to end users in the ZNIs and the tariff paid by end-users of the same socio-economic conditions⁹ or productive activity in the SIN. Investments in generation and distribution are in most cases not commercially viable, with subsidies covering 30% to 80% of costs. The value of subsidies paid by the government in 2008-2012 is estimated at US\$381 million¹⁰.
- 2.4 **Energy generation technologies used in the ZNIs.** Despite its high operational costs and its negative environmental externalities, most of the installed electricity generation capacity in the ZNIs is based on diesel technology (96.3% - [see Figure 2](#)).
- 2.5 **Government initiatives to promote the expansion of private investments in Renewable Energy (RE) in ZNIs.** The government has undertaken a number of initiatives to promote private sector investments in RE generation in the ZNIs¹¹, including: (i) two exclusive service areas, under a concession model, to improve the quality and delivery of energy in the Department of San Andres, Providencia and Santa Catalina and Amazonas;¹² (ii) a public-private partnership law,¹³ as an enabling framework for private investments in public services; and (iii) fiscal incentives, under Law 1715, to encourage private firms or energy enterprises to scale up RE investments via Build, Operate, Maintain and Transfer (BOMT) schemes.¹⁴ Currently, the Regulatory Commission for Energy and Gas (CREG) is developing a resolution to regulate tariffs and remuneration and investment

⁵ According to the [PIEC](#) 0.49 million households do not have access to any electricity services.

⁶ The electricity generating capacity in the ZNIs is distributed among 373 facilities, serving 1,448 locations: 5 department capitals, 39 municipal capitals and 1,404 minor localities. [Superintendency of Domestic Public Services, 2014](#).

⁷ The [Regulatory Commission of Energy and Gas](#) (CREG).

⁸ The [CREG](#) determines costs of service delivery for the operators, taking into account specific localities, energy losses, capacity and availability of installed plants, energy demand, and minimum costs to cover customer needs.

⁹ The Government of Colombia distinguishes electricity tariffs for six different groups of users depending of their revenues.

¹⁰ Ministry of Energy and Mining, 2015. [Statistics Report 2008-2012](#).

¹¹ [CONPES 3108, April 2001](#).

¹² UPME. 2010. [PIEC. Annex I. Development of management schemes for ZNI](#).

¹³ DNP 2013. [Asociaciones Público Privadas - PPP](#).

¹⁴ Law 1715, May 2014. [Integración de las energías renovables no convencionales al sistema energético nacional](#).

requirements that would grant future RE investments similar conditions to current investments and BOMT schemes.¹⁵

- 2.6 These initiatives are part of a broader ongoing effort from the government to increase energy access in the ZNIs, reduce operational costs, and promote a cleaner energy generation. Institutionally, it has set up the Institute for Energy Solutions Planning (IPSE)¹⁶ to manage the development of infrastructure and service provision in the ZNIs. Further, the Mining and Energy Planning Unit (UPME) of the Ministry of Mines and Energy (MME) is assessing the opportunities and investment needs to expand energy access, mainly from RE technologies in the ZNI. Furthermore, the government established the Financial Support Fund¹⁷ for ZNIs ([FAZNI](#)) and the Rural Electrification Fund ([FAER](#)) to provide technical cooperation and financing for the expansion of generation infrastructure in those areas. These funds have supported most of the generating capacity in ZNIs and connections to the SIN, where possible, allocating US\$100 million a year to these activities.
- 2.7 **Topics to be addressed by the program.** In spite of government initiatives, private sector investments in mini-grids using RE generation in the ZNIs are very low (9.4%)¹⁸. The reason has to do with the differences on cash flow profiles between diesel and RE, and the financing conditions available in the Colombian markets. Diesel has much lower Capital Expenditures (CAPEX) than a corresponding RE. At the same time, the former presents much higher Operating Expenses (OPEX) than the latter¹⁹. If the financial market offered reasonable funding opportunities for long term projects, operators could be easily induced to switch from low upfront investment diesel into high RE investments. However, the actual conditions do not provide medium and long term financing at reasonable rates²⁰. This, summed to the still incipient regulatory environment for private sector investments in RE in ZNI, explains, in large part, operators' preference for diesel solutions. This problem is aggravated by the lack of familiarity with RE solutions by the financial intermediaries and the operators.
- 2.8 **Objectives.** The goal of the program is to promote and increase private investments in RE generation in the ZNIs while reducing Greenhouse Gas (GHG) emissions. This would be achieved through a pilot program providing long term financing with adequate conditions to private investors.

¹⁵ The CREG published Resolution 027 -2014, establishing the conditions for the remuneration of operators in the Exclusive Service Areas (ASEs, for its name in Spanish).

¹⁶ [Instituto de Planificación de Soluciones Energéticas](#).

¹⁷ Funded with resources from a fee on the power generated as well as power transmitted.

¹⁸ This percentage is the relation between private and public investments in the infrastructure of ZNIs during the period 2010-2013 (calculated based on data from FAZNI, 2015).

¹⁹ Electricity costs in the ZNIs are high (above US\$0.60 kw/hr) due mainly to operation costs (i.e. cost of diesel transportation). While these costs are greater than those of RE technologies (small hydropower, solar PV in a hybrid system with diesel generators, biomass and wind power)¹⁹, diesel technology remains more attractive to operators because of fuel subsidies. UPME, 2014. [Acciones y retos para la energización de las ZNI en Colombia](#).

²⁰ Currently, the local financial system does not offer investment finance at maturities of more than five years. The essential characteristics of the financing offered are: (i) from the point of view of bank liabilities, their average maturity is less than one year; and (ii) from the point of view of bank assets, the average maturity of local currency loans is around five years.

- 2.9 **Program beneficiaries** will be private sector operators offering and managing public electricity services and renewable technology providers who would be interested in investing in RE mini-grid generation. A market analysis is underway to assess the specific characteristics of the potential beneficiaries of the program, which will be described in more detail in the Proposal for Operation Development (POD).
- 2.10 **Eligible activities** will include medium and long term (more than two years) investments in renewable energy technologies. The market analysis mentioned before will characterize eligible technologies and projects in more detail to be reflected in the POD.
- 2.11 **Single component.** The program will consist of a Global Credit Loan, its' only component will be long-term funding to Bancoldex, Colombia's public bank in charge of supporting entrepreneurial development, for on-lending to eligible first tier local financial institutions (FIs) to provide sub-loans at adequate terms to eligible private sector firms interested in undertaking RE investment projects in the ZNIs.
- 2.12 **Expected impacts** of the program would be an increase in RE generation in the ZNIs and hence a reduction in GHG emissions. Its intermediate outcome would be the percentage increase in energy generation by beneficiary firms from RE sources vis-à-vis comparable, non-beneficiary firms. The outputs would be: an increase in the number of operators who access financing for RE projects; and an increase in the annual dollar amount of medium- and long-term loans granted by the program and its resulting investments in RE.

III. TECHNICAL ISSUES AND SECTOR KNOWLEDGE

- 3.1 The program design will consider the following information: (i) specific eligibility criteria, modalities and characteristics of the financing line; (ii) specific institutional and legal requirements to ensure the support and participation of key market players (e.g. FIs, private operators, insurance companies, etc.) in implementing the financing line; (iii) existing regulatory framework; and (iv) methodological approaches and protocols to monitor results/benefits of the financing line.

A. Program execution

- 3.2 Bancoldex has the necessary fiduciary and operational capacity for the successful execution of the program, as it is governed by the Financial System Act and is subject to oversight and monitoring by the Superintendency of Finance. Also, it operates as a second-tier bank that uses a network of FIs. In addition, Bancoldex has a track record of implementing operations funded by the IDB. Bancoldex is a solvent institution with exemplary risk management practices and the full backing of the government.

B. Program structure and approval process

- 3.3 Following the CTF requirements for co-financing, the single component for the financing of individual RE projects funded with the proposed program resources will be complemented with resources (of up to US\$10 million) from an existing IDB loan with Bancoldex ([2949/OC-CO](#)).²¹ Loan 2949/OC-CO's objectives of providing medium and long term financing for investment projects for technology innovation and modernization are aligned with those of the proposed program. The US\$10 million allocated from 2949/OC-CO for co-financing will correspond to financing for investments in RE technology innovation projects.
- 3.4 The program will be further complemented with a US\$500,000 non-reimbursable Technical Cooperation (TC) from the CTF to be presented jointly with the loan proposal to the CTF. The TC will support the program execution, promotion, monitoring and evaluation, and capacity building efforts with the local financial institutions and the program beneficiaries.

C. Alignment with national and IDB programs and strategies

- 3.5 The program is aligned with the IDB Country Strategy with Colombia 2012-2014 (GN-2648-1). It supports the promotion of lines of credit and the development of financial products (insurance, savings, microcredit, micro-franchises) and non-financial products (technical assistance for small-and medium-sized enterprises) through second-tier banks (see paragraph 3.11 of GN-2648-1).
- 3.6 It is also consistent with the lending target of the GCI-9 on climate change, renewable energy and environmental sustainability and with the IDB's priorities as set out in its strategy for Climate Change Adaptation and Mitigation, and Sustainable and Renewable Energy (see paragraphs 1.3, 2.9 and 3.14 of GN-2609-1) and will ensure consistency with IDB's Public Utility Policy (GN-2716-6).
- 3.7 The program is also aligned with a series of initiatives and policies from the Colombian Government. In particular, it will support commitments under the [National Development Plan 2014-2018](#) to: (i) consolidate national coverage, by providing 24-hour service in larger municipalities and localities of the ZNIs; (ii) boost schemes for power generation from non-conventional sources of energy and hybrid system; and (iii) implement economically efficient electricity generation systems in ZNIs and in areas of difficult access, according to the [Plan of Electrification of Non-Interconnected Zones](#).
- 3.8 The program will be coordinated with ongoing initiatives with Bancoldex, including loan 2949/OC-CO, and three TCs to support Bancoldex in developing and implementing green lines (ATN/SU-12012-CO; ATN/OC-12210-CO and ATN/OC-12718-RG; see Annex IV).

²¹ Third loan operation under execution by Bancoldex (2949/OC-CO, US\$200 million) of an existing CCLIP (CO-X1007).

IV. ENVIRONMENTAL SAFEGUARDS AND FIDUCIARY SCREENING

- 4.1 Since the promotion of RE confronts knowledge barriers and real or perceived risks among different market players, the proposed CTF TC will support Bancoldex overcome those barriers and risks and the program execution. Please refer to the Risk Assessment Matrix for information.
- 4.2 RE projects reduce GHG emission and hence are considered climate friendly. A framework to safeguard eligible projects and to ensure compliance with IDB's environmental and social policies will be defined. See the Annex III for more information.

V. OTHER ISSUES

- 5.1 While the government's efforts referred to in ¶2.5 should provide important incentives for private sector investments in RE, delays in their effective operationalization could reduce the attractiveness for operators to invest. To address these risks, the program will be developed in coordination with relevant national authorities, in particular MME, CREG, IPSE and UPME. The demand assessment for financing by private investors to be undertaken in preparation of the program will assume different regulatory scenarios.

VI. RESOURCES AND TIMETABLE

- 6.1 Preparation of the program will require administrative resources for US\$70,000. The distribution of the Proposal for Operation Development (POD) to the Quality and Risk Review (QRR) is scheduled for September 14, 2015 and consideration of the Loan Proposal (LP) by the Bank's Board of Executive Directors is scheduled for November 18, 2015. Dates are contingent upon the approval of the proposed operation by the CTF.

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¹ The information contained in this Annex is confidential and will not be disclosed. This is in accordance with the "Deliberative Information" exception referred to in paragraph 4.1 (g) of the Access to Information Policy (GN-1831-28) at the Inter-American Development Bank.

SAFEGUARD POLICY FILTER REPORT

PROJECT DETAILS	
IDB Sector	FINANCIAL MARKETS-FINANCING FOR ENVIRONMENTAL SUSTAINABILITY
Type of Operation	Financial Intermediation/Global Credit
Additional Operation Details	
Investment Checklist	Generic Checklist
Team Leader	Netto de A. C. Schneider, Maria E. (MNETTO@iadb.org)
Project Title	CTF Renewable Energy Financing Program for the Non-Interconnected Zones
Project Number	CO-L1161
Safeguard Screening Assessor(s)	Gaggero, Annabella (ANNABELLAG@iadb.org)
Assessment Date	2015-08-11

SAFEGUARD POLICY FILTER RESULTS		
Type of Operation	Loan Operation	
Safeguard Policy Items Identified (Yes)	The Bank will make available to the public the relevant Project documents.	(B.01) Access to Information Policy– OP-102
	The operation is in compliance with environmental, specific women’s rights, gender, and indigenous laws and regulations of the country where the operation is being implemented (including national obligations established under ratified Multilateral Environmental Agreements).	(B.02)
	The operation (including associated facilities) is screened and classified according to their potential environmental impacts.	(B.03)
	The Bank will monitor the executing agency/borrower’s compliance with all safeguard requirements stipulated in the loan agreement and project operating or credit regulations.	(B.07)
	Operation for which ex-ante impact classification may not be feasible. These loans are: Policy-based loans, Financial Intermediaries (FIs) or loans that are based on performance criteria, sector-based approaches, or conditional credit lines for investment projects.	(B.13)

	Suitable safeguard provisions for procurement of goods and services in Bank financed projects may be incorporated into project-specific loan agreements, operating regulations and bidding documents, as appropriate, to ensure environmentally responsible procurement.	(B.17)
Potential Safeguard Policy Items(?)	No potential issues identified	
Recommended Action:	Operation has triggered 1 or more Policy Directives; please refer to appropriate Directive(s), including B13, for guidance. No project classification required. Submit Report and PP (or equivalent) to ESR.	
Additional Comments:		

ASSESSOR DETAILS	
Name of person who completed screening:	Gaggero, Annabella (ANNABELLAG@iadb.org)
Title:	Sr. Operations Analyst
Date:	2015-08-11

COMMENTS
No Comments

ENVIRONMENTAL AND SOCIAL STRATEGY (ESS)

Project Name:	CTF Renewable Energy Financing Program for the Non-Interconnected Zones
Project Number:	CO-L1161
Project Team:	Maria Netto, IFD/CMF, Team Leader; Jose Ramon Gomez, ENE/CCO, Alternate Team Leader; Javier Cuervo, INE/ENE, Jose Juan Gomes, Gloria Lugo, Maria Margarita Cabrera, Leticia Riquelme, Sebastian Vargas, Alejandro Tamola and Annabella Gaggero, IFD/CMF; Alvaro Concha, CMF/CCO; Claudio Alatorre and Veronica Valencia, INE/CCS; Colin McKee, VPS/ESG; and Monica Lugo, LEG/SGO.
Borrower and Executing Agency:	<i>Banco de Comercio Exterior de Colombia S.A. (Bancóldex)</i>
Financial Plan¹:	IDB (Clean Technology Fund) ² : US\$ 9.265 million
Safeguards:	Policies triggered: B.13 Classification: Not required

I. OVERVIEW

1. While Colombia has a high average electricity coverage index (96.1%, with an average of 99.59% in urban areas and 84.84% in rural areas), two-thirds of the national territory are Non-interconnected Zones (ZNI) which are not served by the interconnected system (SIN). The ZNI are composed by a population of 1.83 million inhabitants spread across 1.565 localities, most of which (89%) in rural areas.
2. Only 34% of the ZNI population has electricity service and the available electricity services are provided only for an average of 9.2 hours per day in the capitals of departments and municipalities and for an average of 5.1 hours in smaller localities.
3. Most of the installed electricity capacity in ZNIs (165 MWe) is diesel generated (96,3%), followed by 2.8% by small hydropower and 0.9% by solar energy and other energy sources (see figure 3). Electricity generation costs in these areas are high (above US\$ 0.60 kw/hr) and greater than the costs of available renewable energy technologies in Colombia. However, the payback period for investing in non-convention renewable energy technologies to substitute diesel generation or for providing new generation capacity vary between 5 and 10 years and would require financing providing adequate grace and maturity periods and a rate of interest lower than the internal rate of return of these projects, which is currently not available.
4. In order to address the investments needs to increase access to energy, reduce costs and reliance on diesel generation and dependency on tariff subsidies, the Government of Colombia has been undertaking a number of initiatives³. And from

¹ This financing will be subject to its prior approval by the Trust Fund Committee (TFC) of the Clean Technology Fund (CTF). Once approved by the CTF/TFC, the Bank will proceed with the approval process of the program in accordance with its policies and procedures.

² The financing of renewable energy individual investment projects to be funded with program resources will be complemented with the financing of similar investment projects funded with resources (for up to USD 10 million) of the third loan operation (CO-L1132, USD 200 million) of an existing CCLIP (CO-X1007).

³ See Project Profile.

the regulatory point of view, the Law 1715 of May 2014 to promote the integration of non-conventional renewable energy sources in the Colombian energy matrix, also emphasizes the importance of promoting renewable energy in the ZNIs as part of Colombian sustainable development. Consistent with the law, the MME has established a target to increase the share of renewable energy in the ZNIs to 20% in 2015 and to 30% in 2020, which is estimated to need investments in the order of US\$ 240 million.

5. In spite of government initiatives, private sector investments in minigrids in renewable energy generation in the ZNI are very low. The program's goal is to support Colombia's efforts to enhance and modernize energy services in the ZNIs, while reducing GHG emissions. This would be achieved by pursuing two interconnected objectives: (i) increase private investments in renewable energy generation in the ZNIs; and (ii) build up the capacities of Bancoldex and other market actors on the structuring, financing, monitoring and evaluation of private sector-led, environmentally-friendly, investment projects in renewable energy in the ZNIs.
6. Main end beneficiaries of the program would be private sector operators offering and managing public electricity services and renewable technology providers who would be interested in invest in renewable energy minigrid generation either to substitute existing diesel generation or to provide for energy access in localities without any access to energy. Technologies available in Colombia are: small hydropower, solar PV in a hybrid system with diesel generators, biomass and wind power. It is expected that all projects will be below 20MW as the regulatory framework changes for projects above that threshold and that most projects be below 10MW.
7. The program's only loan component will be long-term dollar funding to Bancoldex, so that it can on lend those funds to eligible first tier local financial institutions for the provision of sub-loans at adequate terms to eligible private sector firms interested in financing renewable energy investment projects in the ZNIs.
8. The financing of renewable energy individual investment projects to be funded with program resources will be complemented with the financing of investment projects in innovation and mitigation of environmental impacts to be funded with resources (for up to US\$10 million) of an existing loan operation (CO-L1132).
9. To support the demand for investment financing, the program will be complemented with a US\$ 500,000 non-reimbursable technical cooperation (TC) from the CTF.

II. ENVIRONMENTAL AND SOCIAL IMPACTS

10. Renewable energy projects deliver long-term GHG emission reductions and are considered environmentally friendly projects as they entail cleaner energy production. However, some projects can entail adverse environmental or social impacts that can be significant and which need to be assessed and managed on a project by project basis. Based on early indicated, this line is preliminarily categorized as FI-2.
11. Environmental issues that may potentially occur include the following:
 - 11.1. Impact on biodiversity and especially on birds and bats mortality rates in the case of wind projects of larger scale.

- 11.2. Deterioration of the access to water (volume and/or quality) for the population in the case of hydro projects.
 - 11.3. Negative impact on primary forest areas or soil contamination in the case of biomass projects.
 - 11.4. Environmental issues caused by the associated infrastructure works if any (construction of roads, transmission lines, etc.).
 - 11.5. Environmental issues caused by the project geographic location in or near sensible areas (protected areas, etc.).
12. Social issues in renewable energy projects are potentially significant. They entail socio-cultural impacts related to land acquisition, land use, indigenous peoples, and cultural heritage.
13. Bancóldex has developed institutional capacity in the management of environmental and social risks and implemented a portfolio-wide Environmental and Social Management System. The system was developed with the technical assistance of the IDB (CO-T1198). Bancóldex has demonstrated strong capacity to manage environmental and social risks under previous IDB lines.

III. STATUS & COMPLIANCE

14. Given that this is a financial intermediary and based on Directive B.13 of the Environment and Safeguards Compliance Policy (OP-703), this transaction is not categorized. Based on early indication, and given the type and size of sub-projects (below 20MW with most projects below 10MW). And the average estimate at 5MW), this operation is estimated to be low to medium risk (FI-2). This classification and the associated risks and mitigation will be evaluated during due diligence. Of the renewable investment options available, the forecast pipeline is concentrated in solar and biomass. It is unlikely that hydro in excess of 10 MW will be financed.⁴

IV. STRATEGY FOR ENVIRONMENTAL AND SOCIAL DUE DILIGENCE

15. Bancóldex will execute the program as part of its current organizational structure. The operational rules governing the program and the eligibility criteria of individual projects will be established in the Operating Regulations document agreed between the IDB and Bancóldex, in accordance with the internal rules and policies of both counterparts, and laws and regulations in Colombia.
16. As per the IDB Environment and Safeguards Compliance Policy and Guidelines, and as part of its due diligence process, the Bank will further assess related E&S risks under this credit line, possible reputational risks, and capacity for environmental and social risk management. This will include:
- 16.1. A review of a proposed pipeline of projects to identify: (i) the location, size, scale, and type (solar, wind, hydro, etc.) of proposed investments, and their direct and indirect ESHS and labor impacts; and (ii) applicable

⁴ During due diligence, IDB will evaluate the role of hydro within the investment pipeline. The presence of hydro with capacity at or above 10 MW in addition to the site specific considerations may affect the final categorization.

environmental and social documentation, permits, and management plans to address their adherence to national laws and regulations and internationally recognized good practice standards.

- 16.2. The adequacy of Bancoldex's existing ESMS to manage the likely impacts under this credit line;
 - 16.3. A sample of similar projects financed by Bancoldex to evaluate the capacity for assessing, managing and monitoring renewable energy projects ranging in scale from 2MW to 20MW.
17. Based on this evaluation, the IDB will prepare an Environmental and Social Management Report (ESMR), which will detail the findings of the analysis and corresponding requirements defined in the Operating Regulations.
 18. The IDB will ensure that appropriate and feasible ESHS and labor requirements, in the form of an environmental and social risks management system (ESMS) applicable to the line, and other conditions as needed, tailored to the particular needs of the operation, are included in the Operating Regulations. The program Operating Regulations will include: (i) Colombian applicable law and regulations, standards, IDB environmental and social policies and safeguards and good practices applicable to the Program; (ii) the classification criteria based on risk and environmental impact of the specific operation; (iii) the process, roles and responsibilities for the evaluation, approval, management and socio- environmental monitoring of projects; and (iv) the specific requirements and procedures applicable by category of risk and environmental and social impact assigned.

ÍNDICE DE TRABAJO SECTORIAL REALIZADO Y PROPUESTO

Estudios	Descripción	Fecha	Referencias y enlaces a archivos técnicos
Opciones técnicas y de diseño	<p>Evaluación inicial del potencial de las energías renovables en Zonas No Interconectadas en Colombia.</p> <p>Evaluación legal de las alternativas de concesiones y acuerdos para Zonas No Interconectadas</p> <p>El sector de energía renovable en Zonas No Interconectadas.</p> <p>Evaluación de los instrumentos financieros adecuados para la promoción en inversión del sector privado en energías renovables para ZNI.</p> <p>Apoyo en el análisis de posibles soluciones tecnológicas (híbrida, minihidro, etc.)</p> <p>Análisis de riesgos y evaluación de posible impacto</p>	Agosto 2015	<p>Colombian Planning Unit on Mining and Energy (UPME) and its Indicative Plan for the Expansion of Electricity Coverage 2013- 2017 (PIEC)</p> <p>The regulatory Commission of Energy and Gas (CREG) determines costs of service delivery for the operators, taking into account specific localities, energy losses, capacity and availability of installed plants, energy demand, and minimum costs to cover customer needs</p> <p>Resolution 186 February 2012 from Ministry of Environment and Sustainable Development</p> <p>Law 1715, May 2014 “Integración de las energías renovables no convencionales al sistema energético nacional”</p> <p>CONPES 3108 Programa de energización para Zonas No Interconectadas</p>
Análisis de viabilidad económica	Evaluación económica del proyecto de la muestra Apoyo para análisis costo-beneficio de solución tecnológica.	Agosto 2015	<p>UPME, 2014. “Acciones y retos para la energización de las ZNI en Colombia”</p> <p>UPME, 2010. PIEC. Annex I. Development of management schemes for ZNI</p> <p>FEZNI, IPSE 2010</p> <p>FAZNI</p> <p>FAER</p> <p>Superintendencia de Servicios Públicos Domiciliarios. Base de datos SUI. www.sui.gov.co</p> <p>XM. Informe de Operación del SIN y Administración del Mercado. Recaudo de los fondos Fazni, Faer, Faes y</p>

			<p>Prone</p> <p>Unidad de Planeación Minero Energético – UPME. Análisis de la ley 1715.</p> <p>International Renewable Energy Agency – IRENA. Levelised Cost of Electricity</p> <p>Departamento Nacional de Planeación. Plan de Desarrollo 2006 – 2010. Estado Comunitario Desarrollo para Todos.</p> <p>SOPESA. Planta de incineración de residuos sólidos urbanos de San Andrés</p> <p>Determinación de Inversiones y Gastos de Administración, Operación y Mantenimiento para la Actividad de Generación en Zonas no Interconectadas Utilizando Recursos Renovables</p>
Capacidad Institucional	Análisis de condiciones crediticias y su impacto en el proyecto Identificación y propuesta de mitigadores de riesgos, implicaciones y actores involucrados	Octubre 2013	National Development Plan 2014-2018
Recolección de datos y análisis para reportar resultados	Matriz de resultados Plan de monitoreo y evaluación	Octubre 2013	Statistics Report 2008-2012 from the Ministry of Energy and Mining, 2015.
Salvaguardias ambientales y sociales	Análisis ambiental del programa Informe de Gestión Ambiental y Social del Programa (IGAS)	Agosto 2015	Project profile

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¹ The information contained in this Annex is confidential and will not be disclosed. This is in accordance with the "Deliberative Information" exception referred to in paragraph 4.1 (g) of the Access to Information Policy (GN-1831-28) at the Inter-American Development Bank.