

**COMBINED PROJECT INFORMATION DOCUMENT AND INTEGRATED SAFEGUARDS DATA SHEET
(PID/ISDS)**

APPRAISAL STAGE

Date prepared/updated: April 27, 2018

I. BASIC INFORMATION

A. Basic Project Data

Country:	Colombia	Project ID:	P161713
		Parent Project ID:	N/A
Project Name:	Colombia Clean Energy Development Project		
Region:	Latin America and the Caribbean		
Appraisal Date:	May 9 th , 2018	Estimated Board Date:	06/22/2018
Practice Area (Lead):	Energy & Extractives	Lending Instrument:	IBRD Guarantee CTF Guarantee
Borrower(s)	Government of Colombia		
Implementing Agency	Ministerio de Hacienda y Crédito Publico / Ministerio de Minas y Energía / Financiera de Desarrollo Nacional		
Capital Structure			
Total Investments			1,015
Equity			254
Debt			761
<i>of which commercial debt (commercial banks, institutional investors)</i>			508
<i>of which DEIs and ECAs (including FDN, IFC, and MIGA support)</i>			254
Total private capital			761
IBRD-CTF Guarantee Amount (indicative)			81
Environmental Category	FI-2		
Decision	Project appraisal authorized.		

B. Introduction and Context

Country Context

Colombia has expanded at an annualized rate of 4.8 percent during the 2002-2014 period, one of the best economic performances in the LAC region, and above the country's potential GDP. Prudent macroeconomic policies and structural reforms have supported sustained growth and FDI inflows, and Colombia has achieved investment grade in March 2011. Growth over this period has been accompanied by a decline in unemployment rate to 9.1 percent by 2014, and by increase in formalization.

Growth has decelerated to an average of 2.3 percent over the 2015-2017 period, and growth started to strengthen in the second half of 2017. Following the large terms of trade shock of mid-2014-2016—estimated at more than 3 percent of GDP—Colombia has appropriately tightened policies, and the current account deficit has adjusted faster than expected to 3.3 percent by 2017. Growth bottomed out in 2017, decelerating to an estimated 1.8%. Private consumption adjusted to the one-off impact of the 3-percentage point (pp) VAT increase. Government consumption remained subdued due to continued fiscal consolidation efforts. The Odebrecht-related corruption scandals weighed on investment decisions and slowed the implementation of the 4G program. On the supply side, industrial production declined in 2017, primarily due to weak performance in the extractive industries, as gold, platinum and silver output plunged. Oil and gas production declined nearly 4% and refining output also fell. The manufacturing of textiles and beverages declined. Financial and social services contributed the most to growth, while the agriculture sector expanded 4.9% as the effects of the El Niño phenomenon dissipated and the livestock sector expanded more rapidly.

Inflation has converged to the targeted range of 3 ± 1 percent, and stood at 3.13 percent in April 2018. Well-anchored price expectations and weaker economic activity enabled the Central Bank to reverse its monetary policy tightening, cutting the policy rate gradually by a cumulative 350 basis points to 4.25 percent by April 30, 2018, appropriately adopting a slightly expansionary policy stance.

Growth is expected to strengthen gradually over 2018-20, supported by higher oil prices, stronger private sector demand, and a pick-up in implementation of the 4G infrastructure program. Ongoing structural reforms will enhance competitiveness and foster diversification, thereby supporting the growth recovery over the medium term.

The Government of Colombia (GoC) has recognized the importance of environmental sustainability and has embraced a Green Growth Strategy for promoting sustainable economic development and competitiveness, and reducing vulnerabilities to the impacts of climate change, which increasingly affect the poor. Natural disasters and climate change are expected to impose significant economic and social costs in the years to come. Colombia has demonstrated its commitment to climate change mitigation, setting a unilateral and unconditional target of 20 percent reduction in its greenhouse gas emissions (GHG) by 2030.¹ The deployment of clean energy projects-renewable energy and energy efficiency- will play a central role in achieving this target.

Sectoral and Institutional Context

Colombia has developed a mature and competitive electricity market. The country reformed the

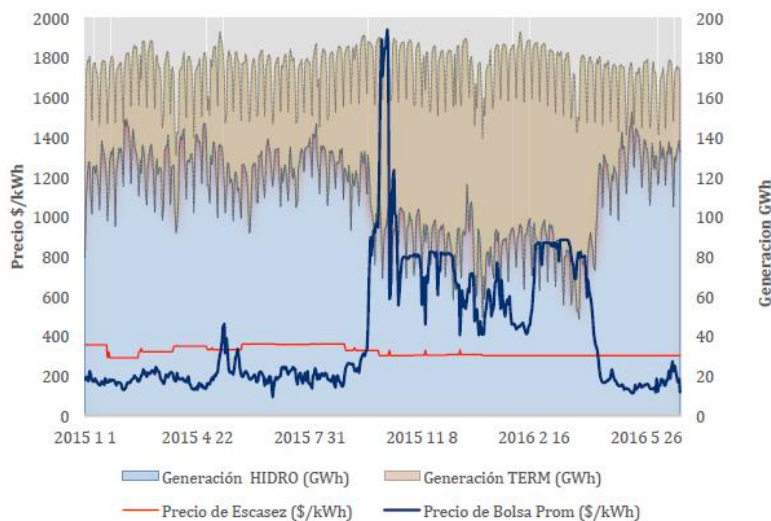
¹ With respect to the Business-as-Usual (BAU) scenario.

power sector in 1994 and introduced a wholesale electricity market where competition was established across the value chain, including in transmission (with tenders for transmission expansion) and retail (with free non-regulated consumers). Commercial transactions are conducted through spot (cost based bidding and marginal cost dispatch) and contracts' markets. And, private sector participation is allowed in all segments of the value chain.

The Colombian electricity system is hydro dominated and thus highly vulnerable to weather variability (notably El Niño Southern Oscillation, or ENSO events). About two-thirds of the installed capacity is hydro-based and roughly 80 percent of Colombia's energy is produced from hydro resources (the rest supplied mainly by coal and natural gas based generation). To ensure the availability of firm energy, the regulator introduced a capacity payment mechanism –whose design and procurement has experienced adjustments over time – to create incentives for the construction and availability of “firm energy services” during times of hydro scarcity. The original capacity charge has evolved into an auction for “firm energy” known as reliability payment.²

From November 2015 to March 2016, Colombia endured a prolonged and intense drought, which lowered hydro reservoir levels threatening the stability of the market and increasing the risk of potential rationing. This episode illustrated once again the vulnerability of the Colombian power sector to ENSO events, and exposed the weakness of the regulations in place -notably the reliability payment-to ensure minimum levels of adequacy and reliability (the impact of this event on reservoir levels and electricity prices is illustrated in Figure 1).

Figure 1. Performance of Wholesale Electricity Market in Colombia during ENSO 2015-2016



² The product defined in the auction for reliability payment is not suitable to the load profile of energy produced by wind and solar sources and it is not designed to capture the value and benefits that NCRE could bring to the system (during water scarcity times and as complementary resources with zero variable costs and no risk of fuel price and availability). Other countries in LAC and worldwide have found market-based solutions, involving the auctioning of long-term PPAs and special commercial arrangements to mitigate market risk to developers. Colombia is now in the process of evaluating different options (CREG document 161 describes 4 options, which are now under consultation).

Source: Oren, Garcia (2016)

Recent assessments have identified several emerging challenges affecting the performance of the electricity market in Colombia. Including: i) high vulnerability to extreme weather shocks (notably El Niño Southern Oscillation, or ENSO events), ii) limited availability and access to natural gas, and high prices (a closed border with Venezuela has created congestion in port, pipeline and storage infrastructure), iii) low electricity prices during hydropower scarcity episodes (a scarcity price is paid to generators for delivering firm energy; however the formula to calculate scarcity price is a function of the Platts US Gulf Coast Residual Fuel Oil Price, which has been low in recent years), iv) design of reliability payments challenged by intense or long droughts, v) lack of incentives for the development of non-conventional renewable energy (NCRE)³ and energy efficiency, vi) certain degree of market concentration and suspected exercising of strategic behavior by large incumbents (50percent of the market dominated by vertically integrated utilities which own large hydropower capacity), and vii) potential conflicts of interest (market operator and administrator owned by transmission company ISA, which is in turn owned by companies operating in the market). The convergence of all these factors is impacting the economic efficiency of the electricity service and challenging the status quo, including both the regulatory framework and market organization. In addition, these problems are creating high uncertainty and deterring private sector participation and investment.

Structurally, the power system still lacks resource diversity and thus the flexibility to cope with seasonal and weather shocks. The reliability payment had the merit of providing firm energy when it was needed, but at an extremely high cost, and most recently the mechanism has not been effective during prolonged Niño events. In practice, the existing regulation has not delivered the diversification of the energy mix necessary to cope with extreme episodes of climatic variability. Colombia needs to find other ways to diversify its energy mix and increase the resilience of the power sector, and both renewable energy and energy efficiency (and demand side management) could play a relevant role in supporting resources diversification and strengthening the resilience, security and sustainability of the system.

Colombia is endowed with abundant and diverse clean energy resources, which could contribute to enhance the resilience of the sector and reduce GHG emissions. Non-hydro renewable energy resources in Colombia are significant, but largely untapped. The International Renewable Energy Agency (IRENA) estimates that Colombia has a high resource potential to develop wind, solar, hydro and geothermal generation (IRENA, 2012). Other recent assessments by the UPME suggest that Colombia has a wind resource with the potential to develop 30 GW of installed capacity, geothermal resources to develop 1-2 GW, as well as regions with very high solar irradiation such as La Guajira and Costa Atlántica (UPME, 2015). Demand side resources -potential for energy efficiency- are also abundant and virtually untapped in Colombia (Annex 2 provides a benchmark analysis that compares Colombia with OECD and similar economies in terms of implementation

³ Renewable energy refers to electricity and heat derived from solar, wind, ocean, hydropower, biomass, geothermal resources, and biofuels and hydrogen derived from renewable resources. In this document, we refer to non-conventional renewable energy (NCRE) as electricity or heat derived from solar, wind, ocean, small scale hydropower, biomass or geothermal resources.

of key measures to harvest this resource).

Studies by UPME have shown that wind patterns in several locations in Colombia are counter cyclical to rain patterns, particularly during ENSO events. This suggests that the development of wind resources -and solar and geothermal- could significantly contribute to diversification and security of supply. For example, wind generation could contribute to maintain hydro reservoirs at higher levels during ENSO events, increasing the system's resilience to cope with prolonged droughts. Thus, the introduction of NCRE to a hydro system would be mutually beneficial (i.e.; the water stored in large hydropower reservoirs can be operated in a way to mitigate the variability of wind and solar, and the counter-cyclical feature of wind generation enables a more reliable operation of the hydro system in times of water scarcity). Recent reference expansion plans released by UPME show that under a business-as-usual or baseline scenario (conventional mix) the average long term marginal cost (LTMC) for the system is 64 USD/MWh, and that for scenarios that allow the entrance of NCRE, the LTMC lowers to 52-55 USD/MWh, in part due to the benefits of diversification and resource complementarity.⁴ Energy efficiency and demand side management -still largely untapped- can also significantly complement supply side resources and contribute to strengthen the resilience and sustainability of the electricity system, as well as to reduce infrastructure capacity and investment needs.

However, there remain various market and regulatory barriers that hinder the development of a clean energy market and private sector participation. These include: i) the lack of specific market and procurement incentives that allow variable renewable energy generation (VRE) to compete on an equal footing with thermal and hydropower generation (hydropower and thermal generation receive a reliability payment), ii) a deep grid interconnection policy that imposes a high burden on project developers (i.e.; the need to issue financial guarantees to secure transmission investment, which is more difficult for small and new project developers), iii) lack of scheduling and dispatching protocols as well as methodologies to estimate operative reserves to integrate VRE, and iv) the lack of specific regulatory measures and price signals that appropriately incentivize energy efficiency (Annex 2 includes a risk matrix that describes these and other barriers in greater detail).

A key barrier to NCRE development is the lack of a market for long-term contracts, which translates into a high off-take, credit, and financing risk. Colombia does not have open and competitive long-term power purchase contractual arrangements in the energy sector. The existing contractual arrangements are primarily bilateral (between generators and retailers) and short-term (the majority of them below three years), reflecting the open market regulation to freely agree between market participants on the quantities, prices, and conditions of electricity purchase and sale. These conditions create selection bias of generators and retailers, and prevent wider competition from new renewable energy entrants in Colombia. which rely on stable and long-term contractual agreements. An additional key barrier to renewable energy development in the current market is the lack of creditworthy counterparties or off-takers for long-term power purchase. Because renewable energy projects with private participation rely on stable and long-

⁴ UPME released an official reference expansion plan in 2016 (expansion period 2015-2029), and a preliminary or draft expansion plan in February 2018 (expansion period 2017-2031).

term contractual arrangements, there would be a need for development of long-term offtake arrangements to attract wider competition.

Small scale renewables in distributed generation and energy efficiency also face several barriers, including financing and implementation risks. Small-scale renewables are primarily developed by private sector entities based on private or public off-take arrangements. Similarly, energy efficiency projects may be developed by energy services companies (ESCO's) with services offered to industrial consumers. Both small-scale project types are subjected to a number of barriers, such as the lack of standardization, no long-term offtake market, relatively limited financing needs at the project level, implementation issues and different counterparties, types and lengths of project life, and risk profiles. These barriers often result in an inability to finance the projects through efficient financing structures (e.g., project financing) and in balance sheet or corporate financing, which can be expensive and limited. The capital market, including banks and other financial institutions, is not trained or familiar with risk assessments of small scale generation and energy efficiency initiatives. Considering the size of small-scale renewables and energy efficiency activities, these barriers must be addressed through appropriate risk mitigation and credit enhancements, including delivery arrangements such as standardization and aggregation mechanisms.

In response to new market signals and the need to increase resource diversity to enhance security and reduce carbon emissions, Colombia has made strides in introducing a legal framework to support clean energy development. The cost of renewable energy technology -notably wind turbines and solar photovoltaics- has decreased dramatically over the last decade and achieved grid-parity in most electricity markets around the world (for example, recent auctions in Mexico, Peru, Chile, Argentina, and Brazil have been successful in attracting private investment and delivering competitive and extremely low prices). Key institutions of the electricity market in Colombia have launched various initiatives to prepare the system for the integration of non-conventional renewable energy (NCRE) and increased energy efficiency. Colombia enacted the Energy Efficiency and Conservation Law in 2001 (Law 697, to promote the rational and efficient use of energy), and the Renewable Energy Law in 2014 (Law 1715, to promote the development and integration of non-conventional renewable energy (NCRE) in the electricity market and non-interconnected zones). Consistent with market signals, the CREG issued document CREG-161 (December 2016) for the consultation of four alternatives to procure NCRE. The National Planning Department (DNP) on the other hand has launched assessments to review appropriate market mechanisms and regulatory avenues necessary to support the development of NCRE. And as part of the national commitments to reduce GHG emissions, MINMINAS has pledged to reduce 20.6 percent of its current GHG emissions (energy sector baseline) by 2030 through diversification of the energy matrix, demand side management, energy efficiency and reduction of fugitive emissions.

Recent developments include the awarding of a new national transmission line and the approval of a ministerial decree that mandates the creation of a mechanism to procure long term contracts for electricity generation. In June 2017, after obtaining the necessary guarantees from prospective wind energy developers, UPME launched the bidding process for the construction of a 500 KV transmission line connecting La Guajira (a department with significant wind resource

potential) with the national transmission network,⁵ The transmission line was awarded in February 2018. Additionally, MinMinas issued Decree 570 (March 23rd, 2018), establishing the policy guidelines to define and implement a mechanism to procure long-term electricity generation contracts. The main objectives of the mechanism are: to boost the resilience of power generation, promote competition and ensure the formation of efficient pricing in the sector, mitigate the effects of climate change and variability, promote sustainable economic development, and reduce greenhouse gas emissions (GHG). The Decree also outlined main attributes of the mechanism, and studies are underway for the design of an auction mechanism. (Further information is provided in Annex 2).

Colombia is faced with very large infrastructure financing requirements that need to be met through a diversification of financing sources. Colombia has a limited project finance market and thus, infrastructure financing needs have been traditionally met through corporate loans or by a small set of commercial banks. Recent projects in 4G road program have attracted capital market financing, including through project bonds, however, such alternative financing sources are still in early stages. A high-level estimation of renewable and energy efficiency investments requires more than US\$ 3.1-4.0⁶ billion of long-term financing in the next few years. The current energy sector market structure for large and small-scale project development is not conducive for long term financing. In addition, local commercial banks and investors are not familiar with clean energy sector risks. For example, commercial banks and investors will be looking for certainty of revenues to minimize their financing risk. Thus, risk mitigation and credit enhancement will be necessary to manage spectrum of financing risks and attract financiers to clean energy sector. In the context of competing infrastructure financing needs, such as 4G roads, Bogota Metro projects in Colombia, there is a critical need to explore new financing sources including from sponsors, equity, and debt from local and international commercial banks, capital markets with participation of institutional investors, and/or intermediary investment vehicles including infrastructure funds.

The development of NCRE in Colombia is imminent given the number of actions being advanced by the GoC, however, the lack of long-term offtake arrangements and lack of availability of adequate long-term financing, are key barriers to market development. While the policy and regulatory actions being taken by the GoC provide a positive signal for the development of clean energy in Colombia, many of the underlying risks related to financing and implementation still prevail. Without clarity on long-term offtake contractual arrangements and long-term financing, clean energy project opportunities may not be implemented at scale. This includes development of market rules for long-term contracting, identification and selection of an appropriate agency that can undertake the role of a central off-taker, development of mechanisms for competitive bidding, creation of standardized contracts, in addition to the design and development of suitable

⁵ In a first stage UPME called potential wind developers to issue financial guarantees to secure a portion of the 500 KV transmission capacity (40% of the value of the transmission capacity necessary to connect their specific generation capacity). UPME received guarantees for 1.4 GW and it already has a pipeline of 4.2 GW of projects ready for the next call (with advanced technical, economic, environmental and social studies, and that have secured most of environmental and land permits).

⁶ Including US\$ 2.6-3.5 billion of large-scale and an indicative amount of US\$ 0.5 billion of small-scale renewables and energy efficiency

financial products, such as risk mitigation and credit enhancement products, to de-risk investments and attract long term financing. The proposed operation is aimed at addressing both implementation and financing risks such that a track record can be established in the clean energy sector in Colombia.

Overall Energy Policy and Overarching Energy Strategy

The overarching policy framework of the energy sector in Colombia is articulated in both, the National Development Plan 2014-2018 and the National Energy Plan of 2015. These two policy instruments establish a clear direction in the three areas of sustainable energy as well as in resilient growth vis-à-vis climate variability (see Annex 2 for a detailed description of relevant objectives in the NDP and NEP). *Under the Green Growth Strategic Line*, the NDP supports various objectives that relate to: the electricity sector (Objective 1), progress towards a sustainable and low carbon future (Objective 2), and the protection and sustainable use of natural capital with improvement in the quality of environmental governance (Objective 3). Achieve a resilient growth and reduce vulnerability to climate change and disaster risk. Under these three objectives, the GoC presents specific directions for promoting renewables and energy efficiency and the creation of a more resilient electricity sector, with an emphasis on modernizing the planning function. The PEN 2015 further details the strategic directions for the intended development of the energy industry and its subsectors. The table below summarizes the key objectives proposed in PEN 2015.

Colombia also committed a Nationally Determined Contribution (NDC) along with other countries after the COP 21 agreements (ratified on April 22, 2016) to flag its climate mitigation and adaptation priorities. In its NDC, Colombia committed to reduce 20 percent of its carbon emissions by 2030 when compared to a projected business as usual scenario.⁷ The sectors targeted for mitigation purposes are: energy, transport, agriculture, land use/land use change and forestry (LULUCF), and industry. Colombia has laid out specific mitigation actions in its Low Carbon Development Strategy (*Estrategia Colombiana de Desarrollo de Bajo Carbono*, ECDBC), which includes actions to promote energy efficiency and renewable energy.

C. Proposed Development Objective(s)

The project development objective is to assist Colombia in increasing electricity generation capacity from non-conventional renewable energy sources and energy savings in the industrial sector, through mobilization of private investment.

D. Project Description

To meet the National Development Plan (2014-18) and National Energy Plan (2015) objectives of achieving sustainable and low-carbon development and reducing vulnerability to Climate Change,

⁷ This target could increase to 30% subject to the availability of international financial support. Colombia only contributes to 0.37% to global carbon emissions, however the amount of carbon emissions per unit of GDP is above the global average.

Colombia has initiated the development of a new clean energy program to tap into its abundant and diverse renewable energy resources.

The current electricity generation and transmission expansion plan (period 2015-2029) estimates that a capital investment in the range of USD 2-5 billion⁸ will be needed to develop non-conventional renewable energy (NCRE) before 2024. MINMINAS and FDN have agreed to join forces to undertake the technical, financial and legal studies necessary to develop a new Renewable Energy and Energy Efficiency Program (*Programa de Energías Renovables y Eficiencia Energetica*, or PER); and as a result, Colombia and FDN have requested support from the IBRD and CTF.

The Project, through the PER, will support the development of clean energy projects, including both renewable energy and energy efficiency. The Project contributes to unlock Colombia's abundant clean energy resources through complementary targeted technical assistance and credit enhancement. The proposed activity will support three categories of Sub-projects:

Category 1. Large scale renewable energy (wind, solar, > 20 MW).

Category 2. Small scale renewable energy (<20 MW) including ground mount and rooftop solar photovoltaic in distributed generation, self-generation and co-generation

Category 3. Energy efficiency activities in the industrial sector

FDN, as financial intermediary, will be undertaking a 'market enabler' role for the clean energy sector. FDN is a domestic development financial institution with majority ownership by the Government of Colombia⁹. With Government and other shareholder support, FDN has strong capital and liquidity position at this stage and has set high governance¹⁰ standards. Its operations, however, are highly concentrated on the 4G road program and therefore exposed to adverse macroeconomic events. FDN is expected to coordinate with relevant institutional stakeholders and market participants the activities necessary for the development and implementation of the PER. Due to existing market and regulatory barriers -mainly the lack of experience with the provision of price or quantity setting mechanisms, and long-term offtake arrangements-, the clean energy market requires strong credit enhancement and risk mitigation from a creditworthy counterpart, such as FDN. FDN's main role will be to develop and offer innovative IBRD/CTF Eligible Financial Products to de-risk Sub-projects and attract long-term investors. These financial products should be sustainable and effective in attracting competitive investments such that the benefits are passed down to the consumers through affordable tariffs and increased reliability during weather or climatic shocks. These financial products will help improve bankability, mitigate policy and regulatory risks and improve investment recovery.

⁸ Estimated amount based on the expected NCRE capacity projected in UPME's current generation expansion plan (scenarios 8 through 12). UPME has also released a preliminary (draft) reference expansion plan for the period 2017-2031, which estimates a capital investment for NCRE capacity additions of around US\$ 6 billion to 2031.

⁹ FDN Shareholders include Government of Colombia (73.37%), International Financing Corporation (8.89%), Sumitomo Mitsui Banking Corporation (8.89%) and Development Bank of Latin America, CAF (8.85%). Further details of FDN is included in Annex 2 and Annex 7.

¹⁰ FDN Board comprises of three Board members from the Government, other three shareholders have one member each and there are three independent members.

The Project consists of one or more IBRD Guarantees in an aggregate amount of up to US\$41 million and a CTF Guarantee in an amount of US\$40 million to backstop FDN's payment obligations to eligible private sector beneficiaries under FDN financial products for eligible sub-projects. Under the Project, IBRD and CTF will guarantee, through FDN acting as financial intermediary, payment obligations of FDN to clean energy sub-projects in two windows: one for renewable energy (RE) sub-projects and the other for energy efficiency (EE) sub-projects. Within the renewable energy window, there will be utility-scale grid-tied renewables and small-scale (< 20 MW) renewables.

The key rationale for IBRD and CTF guarantees is to help the GoC establish long-term credit and off-take market, thereby building a track record for long term investments in clean energy. The development of long term offtake market is key to implementation and financing of clean energy projects. In this context, with the support of WB and CTF guarantees, FDN will be coordinating with relevant GoC agencies to enhance the creditworthiness and bankability of the PER and mitigate sector and investment risks to increase competition from private sector. Similarly, with the WB and CTF guarantees, FDN will design and develop targeted financial products to mitigate financing risks and attract long-term financing. Overall, IBRD and CTF guarantees, through FDN, contributes to establish a track record in sustainable clean energy financing and implementation (e.g., initial auctions of large scale RE and small scale RE and EE aggregation pilot). The role of IBRD and CTF guarantees to support the GoC plans in this initial phase to establish a track record is of highest importance as investors will gain confidence and, over time, should be ready to take covered risk or access other risk mitigating instruments. IBRD and CTF guarantees will help to: (i) enhance the creditworthiness and overall bankability of the PER; (ii) optimize capital allocation for FDN in offering cost effective financial products, and (iii) address investor requirements by helping FDN in developing and offering new credit enhancement and risk mitigation products, and backstop FDN's payment obligations.

Under the proposed structure, FDN will segregate its energy business account (PER account) and manage its financial exposures for the clean energy sector. The PER account is aimed at segregating clean energy sector exposure from other sectors to offer targeted financial products and better management of risks. Additionally, FDN will earmark the Bank's guarantee to specific EE and RE sub-projects (i.e. energy efficiency in industrial sector and wind and solar energy generation). As the PER account will only support clean energy projects, the account is ring-fenced and the Bank's support to sub-projects is traceable. In this respect, all sub-projects under the PER account will be subject to the social and environmental provisions described in this document.

E. Implementation

The Ministry of Mines and Energy (MINMINAS) has the legal obligations established in Law 1715. In this respect, MINMINAS will promote the low-carbon development of the energy sector and deployment of renewable energy and energy efficiency. With this obligation, MINMINAS will lead the interinstitutional dialogue, policy formulation, and activities necessary to address the market failures affecting the development of clean energy. MINMINAS -through UPME- will plan and

launch the procurement processes required to build the transmission capacity to interconnect the volume of large scale renewable energy that the market is prepared (notably in the Guajira department). MINMINAS is also in charge of formulating and issuing the policy to promote renewable energy auctions.

The success of the Project depends also on the formulation of appropriate regulatory measures and market arrangements which are necessary for attracting long term financing and private participation in clean energy. Market institutions such as the Energy Regulatory Commission (CREG) and the Electricity Market Operator and Administrator (XM) have a key role to play in unlocking the development of grid-connected NCRE in Colombia. MINMINAS recently issued Decree 570 (March 23rd, 2018), establishing the policy guidelines to define and implement a mechanism to procure long-term electricity generation contracts and it is in the process of designing an auction mechanism, which will consider the specific characteristics and value of variable NCRE. MinMinas, UPME, CREG and XM (or another agency, such as the National Compensation Chamber, Risk Chamber, or DERIVEX), needs to evaluate the possibility of adopting function of a Central Offtake Agency (COA) or other long-term offtake arrangement, acting as a “custodian” of long-term PPAs, and managing credit, liquidity and operational risks, supported by adequate credit enhancement by IBRD/CTF Eligible Financial Product.

The implementing agency FDN, as a financial intermediary, has the main functions of catalyzing private investment in clean energy. In coordination with MINMINAS and UPME, FDN will maintain a continuous dialogue with key stakeholders of the energy sector to discuss and promote the introduction of appropriate market and regulatory measures necessary to strengthen the enabling environment for clean energy development in the country. FDN will also develop and maintain strong relationships with multilaterals, DFIs, private commercial banks, institutional investors, rating agencies and sponsors interested in participating in the clean energy market. The experiences brought by IBRD and CTF guarantees, from other operations, will also help improve the capacity of FDN.

To accommodate the readiness of Sub-projects, the Project’s components may be implemented sequentially. Depending on the readiness, the Large-scale and Small-scale Sub-projects in renewable energy and energy efficiency activities are expected to be implemented in a different timeline. Thus, the clean energy projects will be delivered sequentially as Sub-projects become ready for implementation. To implement the Project, a detailed Operations Manual will be developed before the guarantee effectiveness, that will set out the principles, operational policies and procedures, financial management procedures, implementation of performance standards (Environmental and Social Management System, including gender considerations), reporting, monitoring and supervision of Sub-projects. The Operations Manual will also include a Business and Implementation Plan for planning and implementing the Project. A key role for FDN will be to select Sub-projects and beneficiaries based on pre-defined eligibility criteria and conduct detailed due diligence on technical, economic, social and gender, environmental, financial feasibility and other project related assessments. The Operations Manual will also focus on standardizing certain transaction documents in creating processing efficiencies and allow for speedier scale-up. The Operations Manual will have specific procedures for small-scale and large-scale Sub-projects to accommodate the timing.

F. Project location and Salient physical characteristics relevant to the safeguard analysis (if known)

The sub-project location will depend on the area’s potential for developing wind and solar generation (Table 1). Some of the large-scale wind and solar sub-projects could be located in La Guajira region. Sub-projects related to energy efficiency and small-scale renewable energy are expected to be located across the country. However, the specific sites where these sub-projects will be developed are yet to be identified.

Table 1. Types of supported sub-projects and potential location

Types of Sub-projects	Window 1 Renewable Energy		Window 2 Energy Efficiency
	Small Scale sub-projects (< 20 MW) - ground mount and rooftop solar photovoltaic in distributed generation, self-generation and co-generation.	Large scale wind and solar energy (> 20 MW)	Sub-projects in industrial sector
Potential location	Across the country	Potentially in La Guajira area	Across the country, including in Cartagena area.

G. Environmental and Social Safeguards Specialists on the Team

- Ernesto Sanchez-Triana (Lead Environmental Specialist).
- Ana Luisa Gomes Lima (Environmental Specialist).
- Carlos Alberto Molina (Senior Social Development Specialist).
- José Vicente Zevallos (Social Development Specialist, Consultant).

Performance Standards Applicable¹¹	Yes	No
PS 1: Assessment and Management of Environmental and Social Risks and Impacts	X	
PS 2: Labor and Working Conditions	X	
PS 3: Resource Efficiency and Pollution Prevention		X
PS 4: Community Health, Safety, and Security		X
PS 5: Land Acquisition and Involuntary Resettlement		X
PS 6: Biodiversity Conservation and Sustainable Management of Living Natural Resources		X
PS 7: Indigenous Peoples		X
PS 8: Cultural Heritage		X

II. Key Safeguard Policy Issues and Their Management

A. Summary of Key Safeguard Issues

1. Describe key environmental and social risks and impacts likely to be associated with the proposed project, if Category C, or the Bank-supported portfolio, if Category FI:

Environmental risks and impacts. The proposed project is anticipated to have a significant, positive effect on the environment, as renewable energy and energy efficiency sub-projects are expected to reduce the need for fossil-fuel based power generation. Thus, the project can contribute to reduce and avoid emission of local pollutants and greenhouse gases.

From FDN's expected portfolio, which includes prospective sub-projects for 2018-2023, supported renewable energy sub-projects are anticipated to have moderate, well-known, and site-specific environmental impacts. The sub-projects may require construction of generating stations, transmission interconnection lines, access roads, and related infrastructure.

Environmental impacts associated with the construction stage include dust and noise from equipment use and material transportation; air, land, and water pollution; earth moving; potential cutting of vegetal cover; increase in water demand; solid waste generation; among others. Construction impacts of sub-projects are expected to be temporary and likely adopted technologies do not pose significant risks to the community's health, safety or security during operation. Once sub-projects start operations, their impacts will largely depend on their specific technologies. In general terms, risks and potential adverse impacts could be, for example, on landscapes, local fauna, avifauna, and indigenous plants and trees.

There is a very low probability that renewable energy generation related works be located close to natural habitat zones. Renewable energy sub-projects, particularly wind power technologies likely to be developed in La Guajira, tend to have low land-use requirements compared to

¹¹ As the Project involves a FI, only Performance Standards (PSs) 1 and 2 are applicable. In this type of project, the Bank reviews the existing portfolio and/or proposed business activities of the FI to identify risks, and assesses whether the Environmental and Social Management System (ESMS) for the Bank-supported activity is appropriate and being followed for managing those risks. By implementing the ESMS, the FI must ensure that sub-projects comply with other Performance Standards (PS1 to PS8), as applicable.

hydroelectric projects, and land between installations can potentially be used for other purposes. They therefore represent low threats to biological corridors and natural habitats.

On the other hand, wind power technologies can have impacts on wildlife. Given the fact that various wind sub-projects might be developed in La Guajira, when combined, those operations can potentially generate cumulative impacts to bat and bird biodiversity, including migratory species. These impacts, however, are largely determined by turbine siting and technology, and can be mitigated with appropriate project design and environmental management provisions.

Social risks and impacts. Large scale wind and solar energy sub-projects are likely to be located in La Guajira area and, therefore, could have adverse impacts on indigenous communities in this area. Potential adverse impacts could include: land acquisition and conversion or degradation of productive land; physical and/or economic displacement; and adverse potential impacts associated with construction activities, including worker accommodation camps and labor influx. Indigenous peoples, who represent 42 percent of the population of La Guajira Department, can be particularly vulnerable if their lands and resources are transformed, encroached upon, or degraded because of solar energy projects and/or their ancillary infrastructure. Indigenous peoples are closely tied to land and natural resources and can suffer disproportionately from land takes for development projects or degradation of natural resources.

Additionally, the sound and visual impact of wind facilities can be a concern if neighboring communities are located nearby the project facility, and they could generate opposition to the project. Both kinds of projects (utility-scale photovoltaic plants and wind farms) often require the establishment of worker accommodation camps involving an influx of outsiders into local communities. Labor influx can be very disruptive for indigenous communities and pose significant risks, particularly for indigenous women.

2. Describe the key features of the client's Social and Environmental Management System and the capacity to implement it in a responsible manner:

In 2014, IFC acquired up to 20 percent of FDN's total capital as part of the transformation of FDN into a catalytic entity for infrastructure financing in Colombia. With the support of the IFC, FDN developed an ESMS and capacity to review all sub-projects in its portfolio per the applicable environmental and social laws and regulations and the Performance Standards.¹² Since 2015, FDN has adopted IFC's Performance Standards to its portfolio, especially in road infrastructure projects. FDN has developed capacities for environmental and social management of the diverse activities related to infrastructure development, including the knowledge of and coordination with the local, regional, and national jurisdictional EIA systems.

During Project preparation, the Bank assessed the adequacy of FDN's ESMS – developed with IFC's support – to the upcoming portfolio of renewable energy sub-projects. After identifying some areas of improvement, the Bank proposed adjustments to better describe the steps and requirements of the due diligence process; to incorporate more gender aspects in the ESMS, among other. FDN fully incorporated those recommendations in the revised ESMS.

¹² For more information, see: <https://disclosures.ifc.org/#/projectDetail/SII/33862>.

The revised ESMS (hereinafter “the ESMS”) is commensurate with the level of social and environmental risks in its portfolio, and prospective business activities, including energy efficiency and renewable energy sub-projects. The ESMS appropriately ensures that all sub-projects supported by the IBRD and CTF guarantees will comply with applicable national and local laws and regulations, and are implemented in a manner consistent with the Performance Standards.

ESMS Instruments. The ESMS provisions are compiled in a set of detailed procedures, organized in eight main chapters that are complemented with guidance notes and forms (Table 2). The ESMS is approved by FDN’s Board of Directors and is regularly updated in accordance to the national legislation, Performance Standards, and other relevant instruments.

Table 2. Components of FDN’s ESMS

Typical components of ESMS for FIs ¹³	FDN’s ESMS (main instruments)
Environmental and social policy	Social and Environmental Policy
Internal organizational capacity and competency	<ul style="list-style-type: none"> • Directive: Responsibilities and Organizational Capacity • Procedure: Training and Awareness
Environmental and social due diligence (ESDD) processes/procedures to identify risks and impacts of borrowers/investees	<ul style="list-style-type: none"> • Procedure: Initial Environmental and Social Assessment • Guidance Note: Exclusion List and Project Categorization
	<ul style="list-style-type: none"> • Procedure: Environmental and Social Due Diligence • Guidance Note: Scope of ESDD • Guidance Note: Required Information for ESDD
Monitoring and review of portfolio	<ul style="list-style-type: none"> • Procedure: Monitoring, Control and Supervision
External communications mechanism	<ul style="list-style-type: none"> • Procedure: Internal and External Communications
Emergency preparedness and response	<ul style="list-style-type: none"> • Procedure: Emergency Preparedness and Response

FDN’s Social and Environmental Policy set forth specific objectives, metrics, and aspirations about its environmental and social performance. The Policy states that FDN is committed to ensuring that its portfolio, as well as its own corporate activities, comply with environmental and social standards and regulations, including the national legislation and the Performance Standards. The Policy was approved by FDN’s Senior Management in 2015 and, in the context of the Project

¹³ IFC, Interpretation Note on Financial Intermediaries. January 1, 2012 - Last Updated: April 2017, paragraph IN20.

preparation, was revised in 2018.

The ESMS has appropriate procedures for: (i) screening and assessing risks and impacts of sub-projects, and (ii) monitoring environmental and social performance of sub-projects. The ESMS describes FDN's organizational capacity, responsibilities, and accountability within the organization for implementing the system.

The ESMS also determines that, before completing the final report on the due diligence procedure, FDN will share with the World Bank the environmental assessment (EA) summary for any sub-project considered of high risk (Category A/1), in accordance to FDN's "Guidance Note: Exclusion List and Project Categorization" (Table 2).¹⁴ Within 10 (ten) business days, the Bank will review the EA summary in accordance to all applicable Performance Standards and, if needed, will request clarifications and/or recommend additional studies to complement the due diligence process. If the Bank does not provide any comment or express approval in 10 (ten) business days, FDN will consider the EA summary approved. If the Bank presents comments, FDN will coordinate with the sub-project developer to carry out additional studies, as applicable, and incorporate the Bank's comments in the EA summary. After incorporating the Bank's comments, FDN will send the revised EA summary for the Bank's final approval under an Absence of Objection basis. If the Bank does not provide any comment or express approval in 5 (five) business days, FDN will consider the EA summary approved and will disclose it in its webpage. FDN will also refer to the developer's webpage for further information.

With regards to monitoring and reporting, the sub-project developer (directly or through an independent expert) must submit periodic reports to FDN's Social and Environmental Department (SED) on the implementation of the environmental and social action plan (ESAP), as well as compliance of national and local regulations and applicable Performance Standards. The frequency of those reports depends on the sub-project category and stage: (i) for A/1 sub-projects, the developer must submit monthly reports at construction, and semi-annual reports at operation and maintenance; (ii) for B/2 sub-projects, the developer must submit quarterly reports at construction and semi-annual reports at operation and maintenance; and (iii) for C/3 sub-projects, the developer must submit semi-annual reports at construction and annual reports at operation and maintenance. The ESMS describes the list of required information for the monitoring reports and specific requirements for monitoring activities related to integrated solid waste management, hazardous waste management and water and energy efficiency. In addition, for sub-projects supported by international finance institutions, the ESMS requires FDN to follow the reporting and access to information policies of those institutions. Consequently, on an annual basis, FDN will submit an environmental and social performance report that summarizes the status of implementation of the ESMS to the World Bank.

The ESMS is fully integrated with Colombia's environmental management system – from environmental licensing to control and oversight. Colombia has one of Latin America's most

¹⁴ As per its "Guidance Note: Exclusion List and Project Categorization", FDN categorizes the subproject as A/1 (high risk), B/2 (moderate risk) or C/3 (low risk).

robust environmental management frameworks and was among the first countries in the world to incorporate Environmental Impact Assessments (EIAs) in its legal framework, more than four decades ago.

A dedicated National Agency for Environmental Licenses, created by Decree 3573 of September 2011, is responsible for ensuring that works, projects, and activities that require an environmental license meet the country's environmental standards and regulations. In addition, sub-national environmental authorities, including Regional Environmental Corporations, have a relatively strong capacity to evaluate EIAs within their jurisdictions. In addition, the World Bank has supported the Government of Colombia to strengthen its environmental management capacity through the Programmatic series of Green Growth DPOs.

As part of its due diligence, FDN also verifies that the projects it finances comply with all relevant provisions on Prior Consultation in Law 21 and the Colombian Constitution. In addition, FDN reviews the outcomes of the consultation process and the agreements reached with indigenous communities and will ensure that such agreements include the implementation of measures to avoid, mitigate or compensate any adverse impacts on indigenous communities, and that such measures are consistent with the requirements of Performance Standards on Indigenous Peoples (PS7) and on Involuntary Resettlement (PS5), where applicable.

FDN's due diligence also evaluates occupational health and safety of labor issues. In addition, private sector companies responsible for sub-projects need to demonstrate the adoption of policies and procedures to establish and foster sound worker-management relationships, consistent with the requirements of Performance Standard on Labor and Working Conditions (PS2). Additionally, FDN verifies that the compensation provided for the loss of assets or restrictions on land use (including those created by rights or ways for transmission lines or easements) are consistent with the requirement of Performance Standard on Land Acquisition and Involuntary Resettlement (PS5). In cases where the project poses a risk to known cultural heritage, FDN requires that the sub-project sponsor develop a plan to avoid any adverse impacts to cultural heritage. In sub-projects that involve excavations and soil movement, FDN reviews the sub-project change find procedures and will ensure that management plans to protect cultural heritage meet the requirements of World Bank Performance Standard on Cultural Heritage (PS8).

Organizational structure and capacity. FDN's senior management is ultimately responsible for environmental and social risk management and allocates the resources to implement the ESMS. The Social and Environmental Department (SED), under the Vice Presidency of Credit and Risks, is the unit in charge of day-to-day implementation of the ESMS. Among its responsibilities, SED provides periodic progress reports to FDN senior management.

SED conducts due diligence processes that integrate desk review with regular field activities in all stages of the sub-project cycle – from design to construction, installation, operation and closure –, and periodically informs FDN's senior management about its activities and sub-projects environmental and social performance.

SED is currently comprised of a director and a technical specialist, who both have a background in environmental engineering. At the screening stage, after assessing the sub-project's characteristics, FDN determines whether the due diligence process will require additional experts, such as a social development specialist. In that case, FDN hires an external consultant to support the SED team.

Considering the social risks of the Project, the Bank recommended FDN to hire a permanent social development specialist for SED to participate in all activities of the ESMS, including the screening process. FDN will hire professionals — through firms or individually – to integrate SED's team in the assessment and monitoring of all sub-projects since the project screening and categorization. The social development specialists will also have experience in gender issues. Additionally, the ESMS includes provisions for a continuous training on relevant social and environmental management topics. These will be aimed at regularly improving its staff's capacity (not limited to the SED team) to apply the performance standards and national regulations to sub-projects.

The Bank found that FDN's experience in implementing the Performance Standards covers mainly road infrastructure sub-projects. Considering the new portfolio of energy efficiency and renewable energy sub-projects, the Bank agreed with FDN to review the due diligence process in the following cases: (i) the first of each type of sub-projects (wind, solar and energy efficiency); and, (ii) the first Category A/1 sub-project for wind and solar energy. Furthermore, as part of the staff training program, FDN will conduct a training on the use of performance standards in wind and solar sub-projects. The World Bank will support FDN in planning and conducting this learning activity.

The Project Operation Manual will determine specific activities to strengthen the SED, such as hiring additional workforce and training. Developers' capacity needs will be established in the action plans prepared for each sub-project.

Emergency Preparedness and Response. FDN headquarters are part of a condominium of multiple offices. The building administration oversees emergency preparedness and response activities in accordance to its emergency plan, which is updated bi-annually. The building has a permanent team of specialists to conduct prevention activities and to respond to emergencies. FDN created the Imminent Emergency Group, formed by volunteers among its staff, to coordinate all aspects related to the emergency plan with the building administration. FDN has all required safety systems, such as fire alarm, evacuation routes and first aid equipment.

Labor and Working Conditions. FDN's human resources policy is consistent with the requirements of national legislation. The Bank found that such policy is accessible to FDN's employees and easy to understand. FDN has adequate policies and procedures to manage and monitor labor conditions among direct employees and contractors, and a functioning grievance redress mechanism for employees, contractors, and the external public. The Bank concluded that FDN meets all relevant requirements of IFC's Performance Standard 2.

Gender aspects. Gender aspects were implicitly included in the original ESMS as part of the general requirements of the Performance Standards. In addition, FDN's human resources policies

determine equal treatment and opportunity for male and female professionals. Through the staff committee, FDN conducts gender-oriented activities, such as awareness campaigns on women's health issues, domestic violence, and career advice. The staff committee has also assigned a gender focal point for employee matters.

During Project preparation, based on recommendations from the Bank, FDN refined its Social and Environmental Policy to expressly state its commitment to ensure that its portfolio – as well as its own corporate activities - comply with environmental and social standards based on gender equality principles. The revised ESMS includes specific provisions to ensure that sub-projects consider gender aspects, particularly when applying Performance Standards 1, 2, 4, 5 and 7. For example, FDN will require sub-projects to ensure that both men and women are consulted in community engagement during and after project construction. Following a recommendation from the World Bank to strengthen FDN's capacity to implement the ESMS, FDN will hire social development specialists who, among other relevant qualifications, must have experience in managing gender issues in infrastructure projects. Additionally, the training workshop planned for 2018 will include a session on best practices to incorporate gender aspects in sub-projects.

3. Describe the key instruments used by the client to identify and assess risks and impacts, and measures taken by the client to address environmental and social risks and impacts of the project. Provide an assessment of client's capacity to implement the measures described:

The specific sub-projects will be developed by private companies and sponsors, including design, construction, installation, operation, maintenance, and closure stages. Those developers are responsible for assessing and addressing environmental and social risks and impacts of sub-projects. As part of the due diligence process, FDN is responsible for identifying and assessing those risks and impacts, and monitor the developer's environmental and social management plan for each sub-project. FDN's role is to ensure that all sub-projects comply with the applicable Performance Standards and other regulations envisaged in the ESMS.

Key instruments to identify and assess risks and impacts. The ESMS includes a screening process to (i) identify environmental and social risks and impacts of sub-projects, associated with environmental, social, labor, occupational health and safety, and security of the business operation considered for financing; (ii) verify compliance with environmental and other national regulations (e.g. assessments, permits, consultations, etc.); (iii) determine the sub-project category and avoid activities listed in the exclusion list; and, (iv) based on the categorization and potential impacts and risks of the sub-project, determine the scope and next stages of the due diligence process. In the next stage, FDN conducts an in-depth review against the relevant national laws and regulations, and, where applicable, against the Performance Standards.

As per its "Guidance Note: Exclusion List and Project Categorization", FDN categorizes the sub-project as A/1 (high risk), B/2 (moderate risk) or C/3 (low risk). FDN requires that all sub-projects comply with national and local laws and regulations. For Category C/3, FDN conducts a simplified assessment to confirm that (i) the sub-project has minimum or no adverse environmental and social impact, and (ii) further due diligence process is not required. For Categories A/1 and B/2, FDN carries out the full process of due diligence and requires the developer to comply all

applicable Performance Standards.

Among other actions, the due diligence consists of (i) reviewing all relevant documents and information provided by the sub-project developer, including information on risks related to the particular industry sector and technical aspects of the operation; (ii) reviewing against pre-determined criteria such as the IFC Exclusion List, national environmental and social laws and regulations, and where applicable, the Performance Standards; (iii) conducting site visits to facilities and meetings/interviews with relevant stakeholders; and (iv) reviewing the sub-project developer's track record on environmental and social issues in terms of potential non-compliance with national regulations or negative publicity. As a result of the due diligence, FDN identifies corrective actions to be taken by the sub-project developer to comply with the Performance Standards.

SED documents the findings of the due diligence in a report, including recommendations to Vice Presidency of Credit and Risk to proceed or not with financing, and any conditions for the financial support, such as an environmental and social action plan (ESAP) with the developer to mitigate identified environmental and social risks and impacts within the sub-project. ESAPs must outline key environmental and social performance gaps in the sub-project identified during the ESDD or monitoring, as well as proposed mitigation measures and a timeline to ensure compliance with applicable national laws and regulations and, as applicable, the Performance Standards.

Cumulative Impact Assessment. Considering the potential cumulative impacts of multiple wind power sub-projects, the Bank recommended FDN to conduct a cumulative impact assessment for wind power investments in La Guajira. Under Component 2 of Project (Technical Assistance), FDN has prepared the terms of reference for such assessment. This study will assess, among other environmental and social issues, the potential impacts of multiple wind power sub-projects in bird and bat species in La Guajira, as well as potential social impacts on local communities, including indigenous groups. FDN will start the assessment in the second semester of 2018, as condition for receiving the Bank's guarantee to wind sub-projects in La Guajira.

B. Disclosure Requirements Date	
For Category FI -- FI's Policy Statement and Procedures for Screening and Assessing Risks:	
Dates of "in-country" disclosure ¹⁵	April 27, 2018
Date of submission for publication in the Bank's external website	April 29, 2018
If in-country disclosure of any of the above documents is not expected, please explain why: N/A	

C. Compliance Monitoring Indicators at the Corporate Level (to be filled in when the ISDS is finalized by the project decision meeting)

Client's Environmental and Social Management System

¹⁵ Available at: <https://www.fdn.com.co/es/la-fdn/responsabilidad-social-ambiental>.

Has the client developed an appropriately detailed ESMS, and does the client have the technical and organizational capacity to implement it?	Yes [X]	No []	N/A []
Labor and Working Conditions			
Does the client have a written human resources policy available to all employees that describes labor and working conditions?	Yes [X]	No []	N/A []
Monitoring and Reporting			
Has the client agreed to submit an annual Environmental and Social Performance Report to the Bank to report progress on implementation of its ESMS, and does the Legal Agreement contain this provision?	Yes [X]	No []	N/A []

D. Approvals

<i>Signed and submitted by:</i>	<i>Name</i>	<i>Date</i>
Task Team Leader:	Gabriela Elizondo / Satheesh Sundararajan	4/29/2018
Environmental Specialist:	Ernesto Sanchez-Triana	4/29/2018
Social Development Specialist:	Carlos Alberto Molina	4/29/2018
Additional Environmental and/or Social Development Specialist(s):	Ana Luisa Gomes Lima (Environmental Specialist); Jose Vicente Zevallos (Social Development Specialist)	4/29/2018
<i>Approved by:</i>		
Regional Safeguards Coordinator:	Noreen Beg (Regional Safeguard Advisor)	5/7/2018
Sector Manager:	Antonio Barbalho (ADM/EEX) / Richard MacGeorge (Acting Manager, GTIFP)	5/8/2018
Country Director	Issam A. Abousleiman (Acting)	5/9/2018