

DOCUMENT OF THE INTER-AMERICAN DEVELOPMENT BANK

COLOMBIA

**EFFICIENT DEMAND-SIDE MANAGEMENT OF ENERGY IN
NON-INTERCONNECTED ZONES – SAN ANDRÉS, PROVIDENCIA, AND SANTA
CATALINA ARCHIPELAGO PILOT PROGRAM**

(CO-L1119)

LOAN PROPOSAL

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ABBREVIATIONS

CGN	Contaduría General de la Nación [General Accounting Office of the Nation]
CGR	Office of the Comptroller General of the Republic
CREG	Comisión de Regulación de Energía y Gas [Energy and Gas Regulatory Committee]
CTF	Clean Technology Fund
DGPPN	Dirección General de Presupuesto Público Nacional [National Public Budgeting Directorate]
DNP	Departamento Nacional de Planeación [National Planning Department]
ESMF	Environmental and Social Management Framework
ESMP	Environmental and Social Management Plan
FENOGE	Fondo de Energías No Convencionales y Gestión Eficiente de la Energía [Fund for Alternative Energy and Efficient Management of Energy]
GWh	Gigawatt-hour
ICB	International competitive bidding
kWh	Kilowatt-hour
MME	Ministry of Mines and Energy
MW	Megawatt
NCB	National competitive bidding
SOPESA	Sociedad Productora de Energía de San Andrés y Providencia S.A.
SSPD	Superintendencia de Servicios Públicos Domiciliarios [Superintendency of Public Utilities]
UPME	Unidad de Planeación Minero Energética [Mines and Energy Planning Unit]

PROJECT SUMMARY
COLOMBIA
EFFICIENT DEMAND-SIDE MANAGEMENT OF ENERGY IN NON-INTERCONNECTED ZONES –
SAN ANDRÉS, PROVIDENCIA, AND SANTA CATALINA ARCHIPELAGO PILOT PROGRAM
(CO-L1119)

Financial Terms and Conditions					
Borrower: Republic of Colombia			Amortization period:		20 years
			Disbursement period:		5 years
Executing agency: Ministry of Mines and Energy (MME)			Grace period:		10 years
			Administrative fee of the multilateral development bank:		0.45% - single payment
Source ^(a)	Amount (US\$)	%	Interest rate:		0.75% fixed
Clean Technology Fund (CTF): ^(b)	10 million	100			
Total:	10 million	100	Currency of approval:		U.S. dollars
Project at a Glance					
Program objective/description: The general objective of the program is to reduce greenhouse gas emissions in non-interconnected zones, by optimizing demand-side management of electricity in the San Andrés, Providencia, and Santa Catalina Archipelago, in order to improve its energy, economic, and environmental sustainability. The program includes the following components: (i) a mechanism for efficient demand-side management; (ii) an environmental sustainability, communication, and social management plan; and (iii) an administration component (paragraph 1.20).					
Special contractual conditions precedent to the first disbursement of the loan: The executing agency will submit evidence, to the Bank's satisfaction, of fulfillment of the following conditions: (i) that regulations have been established for FENOGÉ and the entity that will act as its trustee has been selected (paragraph 3.1); (ii) that the program coordinator has been appointed in accordance with terms previously agreed upon with the Bank (paragraph 3.2); and (iii) that the program Operating Regulations previously agreed upon with the Bank have entered into force (paragraph 3.5).					
Special contractual conditions of execution: Prior to the launch of the activities identified in Component 1 of the program, the executing agency will submit the following, to the Bank's satisfaction: (i) the specific training program on financial management and procurement for personnel at the technical operator and the FENOGÉ trust who are assigned to execute the program (paragraph 3.3); and (ii) the Environmental and Social Management Plan, which was prepared in accordance with the measures and guidelines set out in the Environmental and Social Management Framework (paragraph 3.3). Prior to the launch of the activities identified in Components 1 and 2 of the program, the executing agency will present evidence, to the Bank's satisfaction, of the formalization of a subsidiary agreement between the executing agency and the program's technical operator, in accordance with the terms previously agreed upon with the Bank (paragraph 3.4).					
Exceptions to Bank policies: None.					
Strategic Alignment					
Challenges: ^(c)	SI	<input checked="" type="checkbox"/>	PI	<input checked="" type="checkbox"/>	EI <input type="checkbox"/>
Crosscutting themes: ^(d)	GD	<input checked="" type="checkbox"/>	CC	<input checked="" type="checkbox"/>	IC <input type="checkbox"/>

- (a) These resources will be supplemented by the investment projects financed under the "Water, Basic Sanitation, and Electrification Program for the Colombian Pacific Region" (3610/OC-CO) (paragraph 1.14).
- (b) Proposal for the Establishment of the Clean Technology Fund (CTF) in the Inter-American Development Bank (document GN-2571).
- (c) SI (Social Inclusion and Equality); PI (Productivity and Innovation); and EI (Economic Integration).
- (d) GD (Gender Equality and Diversity); CC (Climate Change and Environmental Sustainability); and IC (Institutional Capacity and Rule of Law).

I. DESCRIPTION AND RESULTS MONITORING

A. Background, problem, and rationale

- 1.1 **Colombia's electricity sector.** The industrial organization and operation of the electricity market are based on the regulatory framework provided under Law 142 (Utilities Act) and Law 143 (Electricity Act) of 1994. Under this framework, the Ministry of Mines and Energy (MME), the National Planning Department (DNP), and the Mines and Energy Planning Unit (UPME) are responsible for policy-making and indicative planning for the sector. The Energy and Gas Regulatory Committee (CREG) and the Superintendency of Public Utilities (SSPD) are responsible for regulation, supervision, and control, respectively. Law 697 of 2001 states that the MME is the agency responsible for promoting, organizing, and ensuring the development and monitoring of programs for the rational and efficient use of energy. These laws, as well as the current institutional framework, provide a sound policy and regulatory foundation for public and private investments in the country.
- 1.2 In accordance with its operating arrangements, Colombia's electricity system is divided into the following two service areas:
 - a. **National Interconnected System.** The National Interconnected System is a liberalized market for trading electricity, via short-term transactions on an electricity exchange and long-term transactions through financial contracts. Under this system, electricity has been bought and sold since 1995 on the wholesale energy market operated by the National Dispatch Center; and
 - b. **Non-interconnected zones.** These are areas in Colombia that are not connected to the National Interconnected System. These areas are characterized by their distance from cities and demand centers; by a high rate of unmet basic needs and a low ability to pay among the local population; by high electricity costs, primarily due to the expense of bringing in liquid fossil fuels; and by a high level of technical losses of electricity. Non-interconnected zones, located in 16 departments, comprise 52% of the national territory but are home to just 2% of the country's electricity users. At present, these areas have installed generation capacity of 215 MW, but only 8% comes from alternative renewable energy sources, while 92% is generated by diesel plants. The government has a presence in these areas through the Instituto de Planificación y Promoción de Soluciones Energéticas [Energy Solutions Planning and Promotion Institute], which is responsible for the service supplied by 92 providers, including 46 municipios, 34 public utility companies, 1 departmental government, and 11 community organizations and cooperatives.
- 1.3 **San Andrés, Providencia, and Santa Catalina Islands.** The Archipelago of San Andrés, Providencia, and Santa Catalina has an area of 52.2 square kilometers. Its capital, the Island of San Andrés, located 720 kilometers northwest of the Caribbean coast, is one of the municipal seats of a non-interconnected zone. The archipelago has 75,167 inhabitants and a population density of 1.44 inhabitants per square meter. Its principal economic activities are tourism and commerce, and to a lesser degree subsistence fishing and farming. After the mestizo and white population (52.42%), the native Raizal

population¹ is the archipelago's second most representative ethnic group (32.81%), followed by blacks, mulatos, and Afro-Colombians (14.64%), indigenous peoples (0.09%), and palenqueros (0.02%).

- 1.4 The archipelago has nearly 100% electricity coverage, with an energy matrix that is almost entirely dependent on fossil fuels. Demand, at around 200 GWh/year in 2013 with maximum power of 32.84 MW, is primarily distributed between the residential, industrial, and commercial sectors, which each accounting for approximately 30% of total consumption.
- 1.5 Based on historical trends, the annual increase in short-term demand is around 2.2%, with medium- and long-term demand trending lower. The archipelago's energy matrix is nearly entirely based on diesel technology, which has a significant environmental and economic impact given that all users receive a government subsidy to cover the difference between the cost to provide the service and the rate charged to users. The provision of electricity is covered by a concession contract under the legal framework of the Exclusive Service Area, signed by the MME and Sociedad Productora de Energía de San Andrés y Providencia S.A. (SOPESA), a private operator in charge of the generation, distribution, and sale of electric power in the archipelago.
- 1.6 Between 2010 and 2012, the Mines and Energy Planning Unit (UPME) of the Ministry of Mines and Energy (MME) conducted a descriptive study on energy consumption and audits in different sectors of the San Andrés, Providencia, and Santa Catalina Archipelago. The results show that most electricity consumption in the residential sector—up to 80%—is for refrigeration, air conditioning, and heating, particularly in households in the higher consumption tiers (4-6).² In other sectors, such as hotels, commercial, and government, the highest demand is for air conditioning, followed by refrigeration and lighting systems. In the hotel sector, air conditioning accounts for 60% to 70% of electricity demand. The causal factors for these high consumption rates have been identified as major inefficiencies due to improper practices in the selection, installation, operation, and maintenance of equipment, as well as technological obsolescence.³
- 1.7 In view of the environmental impact associated with greenhouse gas emissions and the high cost of producing electricity from fossil fuels in the archipelago,⁴ the government decided to prioritize the implementation of energy efficiency and

¹ The Raizal people are the native population of the archipelago and are of mixed indigenous, Spanish, French, English, Dutch, and African descent, with a predominantly British culture. The Raizal community has its own cultural identity: Baptist religion, language (Creole English), and oral tradition. The Raizal community is recognized as a native tribal people in accordance with the International Labor Organization's Convention 169 of 1989, which Colombia was a signatory to, and by the Colombian government in Law 21 of 1991.

² Colombia's National Administrative Department of Statistics classifies residential users based on socioeconomic indicators. This stratification is used to charge for public utilities on a differential basis, with subsidies granted (tiers 1-3) and contributions assessed (tiers 5-6) based on ability to pay.

³ In households that consume less than 400 kWh/month (80% of the residential total), consumption associated with less efficient refrigerators is significant, at between 100 and 200 kWh/month, compared with an efficient rate of consumption of 50 kWh/month. UPME Audits.

⁴ The average spot price of electricity in Colombia in the first quarter of 2015 was Col\$160-\$200/kWh. The price can be as high as Col\$850/kWh in the archipelago.

demand-side management measures⁵ in this area, in order to reduce electricity consumption and greenhouse gas emissions, which are currently at around 169,000 tons of carbon dioxide per year. This would mean savings for consumers by lowering their total electric bill, as well as for the government by reducing the subsidies that it currently provides in non-interconnected zones based on the volume of electricity consumed, which for the San Andrés, Providencia, and Santa Catalina Archipelago total US\$44.6 million per year.⁶ San Andrés has 19,400 users who receive a subsidy for up to 800 kWh/month, compared with 173 kWh/month in the rest of the country. Energy audits conducted by the UPME found that, depending on the targeted sector, there may be total savings of 25% to 55%, broken down as follows: a minimum of 10% from the use of good practices, 10% from technological upgrades, and 10% from architectural remodeling and the use of renewable energy.⁷

Table I-1. Distribution of Energy Consumption by User Type

Use	Type of User ⁸					
Residential	Tier					
	1	2	3	4	5	6
Refrigeration	35%	34%	29%	18%	14%	10%
Ventilation	23%	23%	11%	8%	8%	8%
Air Conditioning	0%	0%	22%	52%	56%	61%
Lighting	12%	13%	13%	9%	8%	10%
Television	19%	18%	10%	8%	7%	3%
Commercial	Sales			Food		
Refrigeration	-			58%		
Air Conditioning	53%			24%		
Lighting	29%			10%		
Industrial	Hotels / Category					
	Large (>300 rooms)		Medium (100-200 rooms)		Small (<100 rooms)	
Refrigeration	24%		13%		6%	
Air Conditioning	60%		64%		75%	
Lighting	5%		11%		7%	

- 1.8 **Program strategy.** The program is designed so that better demand-side management of electricity and use of local energy sources will support the government in its efforts to promote sustainable energy solutions that reduce reliance on fossil fuels, the use of firewood, and greenhouse gas emissions in non-interconnected zones. The program will begin to provide this support by

⁵ The European Union (June 2015), in “Energy Efficiency Trends and Policies in the Household and Tertiary Sectors – An Analysis Based on the ODYSSEE and MURE Databases,” concluded that energy efficiency and renewable energy entail benefits beyond energy savings and reductions in greenhouse gas emissions. The Nordic Council of Ministers, in its report “The Impact of Renewables and Energy Efficiency on Greenhouse Gas Emissions,” documents that as a result of energy efficiency and renewable energy measures, greenhouse gas emissions in these countries are 30% to 40% lower than projected.

⁶ In 2014, the government issued over US\$70 million in electricity subsidies in non-interconnected zones. <http://www.minminas.gov.co>.

⁷ [Acciones en eficiencia energética en el Archipelago, UPME, 2015.](#)

⁸ Most of the Raizal community is in tiers 1 to 3.

developing and implementing a pilot program in the San Andrés, Providencia, and Santa Catalina Archipelago, through the promotion of alternative renewable energy sources and energy efficiency measures specific to the residential, commercial, industrial, and government sectors, and the introduction of systematic metering requirements (smart meters). The plan is to bring energy efficiency measures to nearly 7,200 users in all of the sectors, with priority given to the low-income Raizal residential community,⁹ which is unable to obtain loans or make purchases to upgrade the technology they have for energy consumption (paragraph 1.21). The program is consistent with the principles of the government strategy on electricity coverage for the 39 municipal seats in non-interconnected zones,¹⁰ which recommends: (i) having sustainable business plans for providing the service; (ii) promoting rational and efficient energy use; (iii) monitoring and control of the service; and (iv) structuring energy supply projects with both conventional and alternative renewable energy sources, with the goal of ensuring that 30% of the national energy supply comes from these sources by 2020.

- 1.9 **Country strategy.** By means of Law 697 of 2001, the government declared the rational and efficient use of energy to be a matter of social, public, and national interest. Under that law, the MME established the Program for the Rational and Efficient Use of Energy and Other Alternative Energy Sources ([PROURE](#)). This program seeks to decrease energy intensity, improve energy efficiency in the consumption sectors, and promote alternative renewable energy sources, based on the identification of opportunities and energy savings targets and the share of alternative energy sources and technologies in the country's energy basket.
- 1.10 The government has made it a priority to develop new tools for achieving its targets, including: formulation of a public policy on energy efficiency and the introduction of tax incentives for integrating alternative renewable energy sources into the national power grid (Law 1715 of 2014), and MME Resolution 90325 of 25 March 2014 on the adoption of policy guidelines to reduce emissions in the electricity, mining, and hydrocarbon sectors. The government adopted the Indicative Action Plan 2010-2015, 2020 Vision, in order to develop the PROURE program, and set a target for 2015 of 14.75% savings in national electricity consumption, of which 8.7% would be in the residential sector and 2.7% in the commercial, government, and service sectors.
- 1.11 Under Law 1715 of 2014, the Fund for Alternative Energy and Efficient Management of Energy (FENOGE) was created, which regulates the integration of alternative renewable energy sources into the national power grid. FENOGE resources could finance all or part of the programs and projects to implement small-scale self-generation solutions as well as to improve energy efficiency, through the promotion of good practices, end-use equipment, upgrades of internal facilities, and architectural remodeling. FENOGE will be regulated by the MME ([OEL#7](#)) and administered by a trust set up under the commercial trust agreement entered into by the MME and a trustee authorized by the Office of the

⁹ An income gap between the Raizal and non-Raizal communities was identified in San Andrés, which is widening in the lowest tiers (-10.5%), indicating lower incomes among the Raizal people than among non-Raizals. The gap decreases and disappears as Raizal incomes increase. The author concludes that the Raizal community may experience discrimination that is negative for low-income individuals, but positive for those with higher incomes. [Discriminación étnica e ingresos en la Isla de San Andres](#).

¹⁰ Indicative Plan for Expanding Electricity Coverage, 2013-2017, MME.

Financial Superintendent of Colombia. Under Law 1715, FENOGÉ is authorized to receive funds from the national government, public and private entities, and multilateral and international institutions.

- 1.12 **Recent IDB participation.** The Bank has extensive experience in Colombia's energy sector, in areas such as smart grids, energy efficiency measures, hydroelectric and geothermal energy projects, and support for regional electric power interconnection initiatives.¹¹ The Bank has experience in the San Andrés, Providencia, and Santa Catalina Archipelago through the support it is currently providing with the Program to Support the Sustainable Development of the Department of the San Andrés, Providencia, and Santa Catalina Archipelago (3104/OC-CO), for US\$70 million. The objective of this program is to improve the population's social and economic conditions, through interventions in housing, water and sanitation, coastal infrastructure and risk management, microenterprise development, and fiscal sustainability. The proposed program will complement these actions by improving public utilities and local economic development in the archipelago, as a result of the reduction in expected energy consumption.
- 1.13 The IDB has been working with the Clean Technology Fund (CTF)¹² on the development of operations that promote the implementation of energy efficiency and renewable energy measures in Colombia, such as: (i) CTF Energy Efficiency Financing Program for the Services Sector (CO-L1124) for US\$20 million, aimed at enhancing the competitiveness of hotels, hospitals, and clinics throughout the country, while reducing greenhouse gas emissions, through a private lending program for energy efficiency projects;¹³ and (ii) Renewable Energy Financing Program for the Non-Interconnected Zones (CO-L1161) for US\$10 million, which was approved in February 2016 and was executed by Banco de Comercio Exterior de Colombia S.A., to reduce greenhouse gas emissions by promoting and increasing private investments in renewable energy in non-interconnected zones and isolated locations, providing long-term renewable energy loans in these areas. This program also has US\$552,000 in technical cooperation funds from the CTF (ATN/TC-14531-CO), approved in 2014.
- 1.14 In December 2015, the IDB approved the Water, Basic Sanitation, and Electrification Program for the Colombian Pacific Region (3610/OC-CO) for US\$231 million. The objective of this operation is to support implementation of the "Plan Todos Somos Pazcífico," which seeks to create and enhance the conditions for the economic, social, and environmental development of the population living along Colombia's Pacific coastline, giving priority to water, basic

¹¹ The technical cooperation operations in execution in Colombia are: ATN/KK-14254-CO; ATN/OC-13351-CO; ATN/CM-12805-CO; ATN/CM-12825-CO; ATN/TC-14531-CO; and ATN/OC-14807-RG.

¹² The CTF was created to provide concessional financing to middle-income countries for the demonstration, implementation, and transfer of low-carbon technologies with high potential for reducing greenhouse gas emissions. In 2010, the CTF approved an investment plan for Colombia, ratified in 2013, outlining the strategy, sectors, and objectives of programs and projects to be implemented by the World Bank and the IDB in Colombia, in order to leverage additional resources and support greenhouse gas and climate change mitigation measures. This plan includes US\$39 million in concessional resources for energy efficiency programs, US\$10 million of which will be executed under this program.

¹³ In conjunction with the Innovative Instruments Program for SMEs in Colombia (CO-M1095), this program proposes financing arrangements to overcome barriers to the availability and promotion of resources by the public and private sector.

sanitation, and electrification interventions. The operation includes a sustainable electrification subprogram for US\$91 million, which has the following objectives: (i) promote the population's access to reliable, efficient, and sustainable electricity; and (ii) move forward with the promotion of sustainable energy solutions that decrease dependence on fossil fuels and the use of firewood and reduce greenhouse gas emissions. The subprogram will benefit over 20,000 families in the area.

- 1.15 The Bank's experience in the sector has enabled the identification of important lessons that were used to design this program, including: (i) the importance of ensuring the technical capacity of the executing agency as an integral part of the project within the context of actual conditions in the country. An operational execution mechanism that is close to the beneficiary community and an administrative mechanism with extensive experience in trusts were established for the program; (ii) the need for support and leadership at the highest level of the institutional framework, so that the intervention is given priority and situated as part of a previously defined public policy. High level meetings were held with the MME, the DNP, and the Ministry of Finance throughout program preparation, with agreements reached on the scope of the intervention and the execution mechanism; and (iii) ensuring compliance with social and environmental criteria in line with the Bank's safeguards policies and actual conditions in the country. This includes environmental requirements and criteria for prioritizing beneficiaries, which will also be set out in the program Operating Regulations (paragraph 3.5).
- 1.16 **Strategic alignment.** Although the program is not directly aligned with any specific strategic objectives in the Bank's country strategy with Colombia 2015-2018 (document GN-2832), it will contribute to the strategic area of improving public management effectiveness, by ensuring the financial sustainability of the electricity sector in the San Andrés, Providencia, and Santa Catalina Archipelago through a reduction of subsidies, as well as to the crosscutting strategic area of climate change, inasmuch as it will reduce greenhouse gas emissions. In addition, the program is consistent with the Update to the Institutional Strategy 2010-2020 (document AB-3008) and is aligned with the following development challenges: (i) social inclusion and equality, under the relative criteria where beneficiaries are expected to predominantly be from low-income sectors or sectors with less access to public services. This will be achieved by developing a mechanism to finance energy efficiency measures that will primarily benefit tiers 1 to 3, i.e., 90% of the expected beneficiaries, with a reduction in electricity consumption in the archipelago. Vertical logic is reflected by better delivery of infrastructure services in an inclusive manner, channeling them through the private sector; and (ii) productivity and innovation, by contributing to higher productivity at small businesses, the promotion of innovation, productive chains, and technological development, by introducing the financing mechanism and establishing commercial chains for the use of new low-cost, low-energy technologies. The use of efficient technologies by the tourism and commercial sectors is expected to lead to lower consumption of electricity, while reducing greenhouse gas emissions. This will make it possible to create an environment conducive to public and private initiatives based on clean technologies. Private investment will be supported through direct and indirect investment of projects that improve environmental and social outcomes. The program is aligned with the crosscutting

areas of: (i) gender equality and diversity, by prioritizing the low-income Raizal community's access to benefits, based on technological upgrades made by replacing electric appliances with high efficiency models. More than 40% of the beneficiaries are expected to be from the Raizal community in the lowest tiers (tiers 1 to 3), which presently has high average consumption rates of electricity for refrigeration and ventilation (100-200 kWh/month) compared with higher tiers (50 kWh/month). The mechanism promotes loan payments based on the savings generated by reduced consumption, with preferences and facilities for tiers 1 to 3 and the Raizal community. This output will help reduce power consumption; and (ii) climate change and environmental sustainability, by financing energy efficiency measures that will reduce the consumption of power generated from fossil fuels, require the sustainable disposal of obsolete equipment, and the installation of stand-alone photovoltaic systems that will lead to a reduction of greenhouse gas emissions.

- 1.17 The program is consistent with the Energy Sector Framework Document (document GN-2830) inasmuch as it promotes energy efficiency, renewable energy, and the use of cleaner fuels for energy sustainability purposes. It is consistent with the Climate Change Sector Framework Document (document GN-2835-3) inasmuch as it promotes innovate financing arrangements, incentives, and instruments for investments, dissemination of technologies, and best practices in greenhouse gas reduction. The program will contribute to the Corporate Results Framework 2016-2019 (document GN-2727-4) by financing new generation capacity based on renewable sources of energy. It is aligned with the strategic principles of the Sustainable Infrastructure for Competitiveness and Inclusive Growth Strategy (document GN-2710-5) and its priority area of support for the construction and maintenance of environmentally and socially sustainable infrastructure that helps increase quality of life in the archipelago.
- 1.18 **Consistency with IDB policies.** The program is consistent with the objectives set out in the Public Utilities Policy (document GN-2716-6) ([OEL#5](#)). The operation fulfills the conditions of financial sustainability and economic evaluation, in keeping with the draft regulations of FENOGÉ, which states that projects to be financed with fund resources must undergo cost-benefit analyses that compare the cost of the project with the economic savings or income produced. Fulfillment of these conditions is reflected in the economic analysis of the investment (paragraph 2.6), which shows that replacing old appliances and equipment with more efficient models will reduce energy consumption, greenhouse gas emissions, and government subsidies for fossil-fuel-based power. The program establishes the allocation of benefits in a transparent, direct, and targeted manner, favoring low-income groups. The current volume of rate subsidies will decrease due to a reduction in consumption, not to changes in the subsidy system established by CREG and the concession contract.
- 1.19 **Alignment with CTF objectives.** The program is consistent with the CTF objective of contributing to the demonstration, deployment, and transfer of low-carbon technologies with potential for long-term reductions in greenhouse gas emissions, inasmuch as it will: (i) generate positive incentives to demonstrate low-carbon development and mitigation of greenhouse gas emissions; and (ii) promote shared environmental and social benefits to demonstrate the potential of low-carbon technologies to contribute to sustainable development

and achieve the Sustainable Development Goals (SDGs) approved by the United Nations. In particular, the program contributes to SDG 7, to ensure access to affordable, reliable, sustainable and modern energy for all, inasmuch as it will contribute to the goal of doubling the global rate of improvements in energy efficiency; and to SDG 13, to take urgent action to combat climate change and its impacts, inasmuch as it will contribute to improving education, awareness, and human and institutional capacity for climate change mitigation and impact reduction.

B. Objectives, components, and cost

- 1.20 **Objectives.** The general objective of the program is to reduce greenhouse gas emissions in non-interconnected zones, by optimizing demand-side management of electricity in the San Andrés, Providencia, and Santa Catalina Archipelago, in order to improve its energy, economic, and environmental sustainability. The program includes the following components:
- 1.21 **Component 1. Mechanism for efficient demand-side management (US\$7.11 million).** Financing will be provided for a lending mechanism by type of customer, which will help users in the archipelago to implement energy efficiency and renewable energy measures, such as: (i) technological upgrades, by replacing refrigeration, ventilation, and lighting equipment with energy-efficient models, for residential, commercial, industrial (small and midsize hotels), and government users; and (ii) installation of stand-alone photovoltaic solar power solutions that will reduce consumption of energy generated from fossil fuels in industry and government. The technologies to be financed must have energy certification through a labeling system developed by the MME, or an equivalent system approved by the MME through the UPME, in mutual agreement with the Bank.
- 1.22 The technologies offered to the residential sector are: refrigeration for all tiers, roof turbine vents to improve ventilation conditions for tiers 1 to 3; air conditioning for tiers 3 to 6; and lighting for all tiers. For the commercial and industrial (hotels) sectors, the program includes high-efficiency refrigeration, air conditioning, and lighting. For the government sector, the proposal is just for high-efficiency air conditioning and lighting. Grid-connected solar energy solutions will be offered for self-consumption in the hotel sector and government buildings, where consumption curves and roof availability for solar panels will ensure that 5-kilowatt-peak or higher systems can be installed without generating surplus power to the grid.
- 1.23 The basic conditions established for use of the lending mechanism are: (i) investments in institutional (government) users will be made on a nonreimbursable basis, with these beneficiaries receiving approximately 5% of investments; and (ii) the loan payment installments set for other users will be based on a percentage of the savings generated by the decrease in consumption reflected in electricity bills, as follows: payment equivalent to 60% of the energy saved over 24 months for residential users in tiers 1 to 3; 85% over 48 months for commercial, industrial (low-range), and residential users in tiers 4 to 6, and 85% over 24 months for mid-range industrial users. The program seeks to benefit the greatest number of users possible with the available resources, with priority access given to the Raizal community. The beneficiaries will have access to financing for one time only. The program Operating Regulations will provide

details on the mechanism for program participation, prioritization of beneficiaries, and provision of equipment, as well as the formulas for calculating savings reflected in electricity bills, and the technical specifications of equipment eligible for replacement (paragraph 3.5). Beneficiaries will be prioritized based on the order of annual execution by type of user established in the results matrix, with preference given to tiers 1 to 3, and with Raizal residential users expected to account for over 40% of the beneficiaries in tiers 1 to 3.

- 1.24 Loan payments will be directly deposited in the FENOGE trust (paragraph 3.1), for subsequent onlending to new beneficiaries. The program will finance this mechanism throughout the five-year execution period. Once the program has ended, FENOGE, through its trust, may continue the activities for an additional period, estimated at five years, for a total duration of 10 years, using the resources recovered through payments received under the established lending system. The program is expected to benefit around 7,200 users over the 10-year period, with 5,000 benefitted during the first five years of execution.
- 1.25 **Component 2. Environmental sustainability, communication, and social management plan (US\$1.82 million).** This component will finance: (i) the design and implementation of an environmental management plan that establishes the measures and mechanisms to be used for proper end disposal of the equipment replaced during the program; (ii) design and implementation of a program communication and promotion strategy targeted to potential beneficiary users; and (iii) design and implementation of a social management plan that will include activities to promote the participation in the program by tiers 1 to 3, especially in the Raizal community, training for end users in efficient energy use and conservation and in the maintenance of newly installed equipment, and trainings at educational facilities and community centers, delivery of informational materials to beneficiary users, design and implementation of a training course for energy efficiency technicians, and an analysis of alternative potential demand-side management measures for end users. It is expected that at least 50% of the individuals who receive training will be from the Raizal community. This component will also generate additionality by incorporating a gender perspective, with women expected to make up at least 50% of beneficiaries receiving training.
- 1.26 **Administration (US\$1.07 million).** Financing will be provided to cover the financial cost of the FENOGE trust, the administrative expenses of the program operator, and activities to support the MME with program execution such as the services of a coordinator, as well as operating and logistics costs and audit, monitoring, and midterm and final evaluation costs.
- 1.27 The costs associated with these activities are described in Table I-2.

Table I-2. Total Program Cost (US\$)

Investment categories	US\$
Component 1. Mechanism for efficient demand-side management	7,110,000
Investments in energy efficiency measures	7,110,000
Component 2. Environmental sustainability, communication, and social management plan	1,822,000
Design of the comprehensive environmental and social awareness plan	30,000
Implementation of the comprehensive environmental and social awareness plan	1,412,000
Design of the program communication and promotion strategy	30,000
Implementation of the program communication and promotion strategy	350,000
Administration	1,068,000
MME program coordination (coordinator, monitoring and evaluation activities, and audits)	450,000
Administrative costs of operator	468,000
Cost of FENOGE trust	150,000
Total	10,000,000

C. Key results indicators

- 1.28 The [results matrix](#) shows the impact and outcome indicators associated with the program objectives. In terms of impact, the energy efficiency measures to be implemented will help mitigate climate change by preventing the release of approximately 9,800 tons of carbon dioxide each year. The main outcomes that have been identified are: reduced energy consumption in the commercial, residential, industrial, and government sectors; and improved financial sustainability of the electricity sector in the San Andrés, Providencia, and Santa Catalina Archipelago. The proposed indicators for these outcomes are: (i) annual energy saved as a result of the energy efficiency measures implemented; and (ii) decrease in the subsidies provided for electric power generation. A minimum of 4,640 residential users are expected to benefit from energy efficiency measures, 90% of whom are in tiers 1 to 3 and in groups with low ability to pay, and nearly 1,800 of whom are in the Raizal community.

II. FINANCING STRUCTURE AND MAIN RISKS

A. Financing instruments

- 2.1 **Financing structure.** The program is structured as a specific investment loan for US\$10 million, to be disbursed over a five-year period in accordance with the disbursement schedule in Table II-1, which is detailed in the [multiyear execution plan](#).¹⁴

¹⁴ In accordance with the proposal for the establishment of the CTF at the IDB (document GN-2571), to finance individual investment projects in energy efficiency, the CTF resources will be supplemented by investment projects financed under the Water, Basic Sanitation, and Electrification Program for the Colombian Pacific Region (3610/OC-CO), currently in execution (paragraph 1.14).

Table II-1. Disbursement Schedule

SOURCE	Year					TOTAL
	1	2	3	4	5	
CTF	496,000	1,701,879	2,604,774	2,646,374	2,550,974	10,000,000
TOTAL	496,000	1,701,879	2,604,774	2,646,374	2,550,974	10,000,000
IDB disbursements (%)	5.0%	17.0%	26.0%	26.5%	25.5%	100.0%

B. Feasibility and sustainability

- 2.2 **Technical feasibility.** During preparation of the operation, a technical feasibility analysis was conducted ([OEL#2](#)) to determine the market potential for developing a program in energy efficiency and alternative energy sources for the different types of users in the San Andrés, Providencia, and Santa Catalina Archipelago. The analysis included the following considerations: (i) potential energy savings through investments to replace end-user equipment with more efficient equipment, and the introduction of photovoltaic solar systems in the industrial sectors (small and midsized hotels) and in the government sector; (ii) identification of the technologies that will be included in the program, using as a reference the distribution of consumption among the users identified by the UPME through energy audits; (iii) identification of investment potential of the program, under different penetration scenarios among the selected users and eligible technologies by type of user; (iv) identification of different penetration scenarios; (v) reduction of greenhouse gas emissions that would result from implementation of the program; and (vi) preparation of a program operation proposal, taking into account the characteristics of potential beneficiaries as well as operational risks.
- 2.3 The analysis found that the energy efficiency program for the San Andrés, Providencia, and Santa Catalina Archipelago is technically and economically feasible. Based on the analysis, the most technically and economically feasible energy efficiency and renewable energy measures were identified, notably the replacement of refrigeration technologies (refrigerators), air conditioning (roof turbine vents and air conditioners), and lighting, and solar energy solutions for the government (at a smaller scale) and industry (hotels). The equipment to be installed that will be supported by the program must have energy certification acceptable to the MME, in mutual agreement with the IDB (paragraph 1.21).
- 2.4 **Sustainability.** The program will contribute to the environmental sustainability of the sector by reducing greenhouse gas emissions as a result of replacing refrigerators, air conditioners, and lighting with more energy efficient models. The program includes activities for raising environmental awareness and providing training on energy efficiency measures, which will help reduce energy consumption and ensure the technical sustainability of the measures implemented. Participation in the program will require systematic measurement (smart meters) at the end-user level. The energy efficiency measures will lead to a reduction in the subsidies granted by the government for electricity produced from fossil fuels, thereby contributing to the financial sustainability of the sector.
- 2.5 **Institutional feasibility.** In 2014, an institutional capacity assessment of the MME was conducted in connection with preparation of the Program for Institutional Strengthening of the Mining and Energy Sector (3594/OC-CO). The assessment found that the MME has a satisfactory level of institutional

development, which is associated with a low risk. The assessment pointed out that the MME has little experience in the execution of programs with multilateral development banks and recommended strengthening the areas of support that would be involved in program execution. The execution mechanism established for the program includes the active participation of a technical operator and a trustee and provides support to the MME on activities for program execution that will ensure smooth operation for both the Bank and the MME (paragraph 1.26).

- 2.6 **Economic feasibility.** A cost-benefit analysis was conducted to evaluate investments under the mechanism for efficient demand-side management ([OEL#1](#)). Two primary benefits were identified and quantified: savings in subsidies and a reduction in greenhouse gas emissions. Current tax subsidies received in the region for this service total approximately US\$30.2 million per year. Taking into account the expected decrease in consumption and using a social discount rate of 12%, the proposed activities meet the economic feasibility requirements. A sensitivity analysis was run in order to validate the distribution of the program's beneficiaries by sector and by technology implemented, as well as to verify the conditions of the economic model on which the program is based, which yields an internal rate of return of 12.5% and a net present value of US\$112,689 at 10 years. A reduction in emissions equal to 9,800 tons of carbon dioxide per year is estimated (for a cumulative total of approximately 141,000 tons of carbon dioxide, considering a useful life of 15 years for the technologies). Subsidy reductions will yield an estimated simple return for the government of 4.3 years on US\$10 million, with cumulative savings of US\$15.2 million over the 10-year period and about 5.7% annually thereafter.
- 2.7 Taking into account the potential savings and reduced emissions expected during the average 15-year useful life of the technologies in all sectors, reducing one ton of carbon dioxide costs around US\$70. The per-ton savings generated, based on a cost of Col\$900 per kWh, are US\$450 per ton and assuming a constant price of energy over the period. Accordingly, approximate benefits of US\$330 per ton will be achieved.
- 2.8 As part of the validation of the analysis, sensitivity calculations were performed on the main input variables that were identified: (i) program penetration rate by user segment and technology; (ii) financial variables such as discount rates, exchange rate, portfolio share, and post-consumption costs; (iii) potential savings by technology; and (iv) the cost of each technology. The highest level of sensitivity was found in the penetration rate in the government, commercial, and residential sectors, which is consistent with the consumption and subsidy levels associated with them.
- 2.9 The discount rate and exchange rate are the financial variables with the highest impact, requiring a maximum of 12.4% and Col\$3,100 per US\$1, respectively, to generate a positive net present value. Based on what was found in the sensitivity analysis, the scope of the program was adjusted in terms of users, segments, and rates to be applied in order to ensure economic feasibility.

C. Environmental and social risks

- 2.10 In accordance with the Bank's Environment and Safeguards Compliance Policy (document GN-2208-20 and operational policy OP-703), the program has been classified as a category "B" operation (see Annex IV). The operation has potential environmental impacts that are limited in scope, temporary, unscalable,

and can be mitigated. The energy efficiency measures financed by the program are expected to generate savings in the consumption of electricity produced from fossil fuels, which will result in reduced greenhouse gas emissions and an improved quality of life for residents of the San Andrés, Providencia, and Santa Catalina Archipelago. The Environmental and Social Management Report (ESMR) ([REL#5](#)) identifies the biggest environmental risk as the disassembly and improper disposal of discarded refrigerators and air conditioners, causing pollution from lubricant spills and gas leaks. To mitigate this risk, the MME, in coordination with the Bank, developed an Environmental and Social Management Framework (ESMF) ([OEL#13](#)), to be used by the MME and the program's technical operator through FENOGE, as part of the program Operating Regulations (paragraph 3.51.21) to comply with the IDB environmental and social safeguard policies.

- 2.11 The ESMF establishes guidelines to: (i) conduct a preliminary evaluation of the activities that will be part of the operation, based on their potential environmental and social risks and impacts; (ii) classify the activities based on their environmental and social risks; (iii) determine the requirements for preventing and mitigating these risks; (iv) determine the eligibility of the projects to be financed; and (v) monitor and supervise environmental and social management of the operation. The ESMF includes measures and guidelines for the Environmental and Social Management Plan (ESMP), to be covered by program resources, for the collection, transport, storage, disassembly, and disposal of the obsolete refrigeration, air conditioning, and lighting equipment that will be replaced. The technical operator of the program will be responsible for preparing the ESMP, in accordance with the ESMF measures and guidelines, for the MME's approval and the Bank's no objection. Prior to the startup of activities under Component 1, the executing agency will submit the ESMP to the Bank's satisfaction.

D. Fiduciary risks

- 2.12 An assessment of the fiduciary management capacity of the MME was performed in February 2014, as part of preparation of the Program for Institutional Strengthening of the Mining and Energy Sector (loan 3594/OC-CO). The tools used for this assessment were the Institutional Capacity Assessment System and an analysis of the principal institutional processes. The assessment concluded that the MME has sufficient capacity to perform the program's financial management, resource administration, and procurement activities, but has little experience in the execution of programs with multilateral institutions, which represents a medium fiduciary risk. This risk will be mitigated by the following:
- a. Financial management measures: (i) preparation and entry into force of the program Operating Regulations (paragraph 3.5); and (ii) appointment of a program coordinator (paragraph 3.2) at the MME who will coordinate program activities with the FENOGE trustee, the technical operator, entities involved in the program, and other government agencies; and
 - b. Procurement measures: (i) support for the technical operator provided by an official/consultant with experience in Bank-financed procurements, as well as training in financial management, IDB procurement procedures, and the use of the Bank's Procurement Plan Execution System (SEPA), for the working team of the operator and the trustee assigned to the program; and

(ii) together with the Bank, design a detailed and complete flow chart of interventions and approvals involved in the procurement and contract management process.

E. Other project risks

- 2.13 A development risk identified as being high would be low demand for the resources among potential beneficiaries due to lack of familiarity with the program. To mitigate this risk, a social management and communication plan will be implemented as part of Component 2 in order to disseminate information and promote participation in the program. The following medium development risks were also identified: (i) delays in the selection and contracting of the program's technical operator, which would delay execution of the program; (ii) delay in issuing the decree regulating the operation of FENOGE; and (iii) the possibility that the same beneficiary could benefit from replaced equipment more than once, which could lead to the creation of a parallel market with the equipment supplied under the program.
- 2.14 To mitigate these risks, the following measures were established, respectively: (i) preparation of a legal analysis with legal recommendations on existing options for program operation, and preparation of a market analysis on potential program operators, financed with funds from the technical cooperation operation Support for the Energy Efficiency Program in the San Andrés, Providencia, and Santa Catalina Archipelago ([ATN/TC-14531-CO](#)); (ii) monitoring meetings between the IDB and the MME to report on the progress made in the FENOGE approval process¹⁵ and support provided by the Bank during preparation, with technical and legal counsel;¹⁶ and (iii) creation of an electronic card with a pre-established amount that will be given to each beneficiary user, limiting the number of appliances or equipment that the person can receive.

III. IMPLEMENTATION AND MANAGEMENT PLAN

A. Summary of implementation arrangements

- 3.1 **Execution mechanism.** The MME will be the executing agency for the program and is responsible for its technical and administrative management. Given the synergies between the program objectives, execution structure, and the objective of FENOGE, the MME will channel CTF resources through FENOGE for execution, through the trustee in charge of the administration and management of the fund's resources. The trustee will keep separate accounts for program resources, including program disbursements and loan payments made by the beneficiaries. **As a special contractual condition precedent to the first disbursement, regulations will be established for FENOGE and the entity that will act as its trustee will be selected.**
- 3.2 The MME will appoint a coordinator who will work exclusively on the program, ensuring strict compliance with the provisions of the program Operating Regulations (paragraph 3.5). The coordinator will be responsible for the formulation, procurement, execution, and monitoring of all of the projects and

¹⁵ The approval process for the decree regulating FENOGE is out of the consultation period; it should be approved in October 2016.

¹⁶ The Bank helped the MME with a legal analysis ([OEL#6](#)) of the options for program operation, which found that the operator may be the current concessionaire (SOPESA) or a third party.

activities to be financed, including the commissioning of the required audits. To this end, it will coordinate the program activities with FENOGE, the technical operator, entities involved in the program, and other government agencies. **As a special contractual condition precedent to the first disbursement, the program coordinator will be appointed, in accordance with terms previously agreed upon with the Bank.**

- 3.3 **Special contractual conditions of execution.** Prior to the startup of activities under Component 1 of the program, the executing agency will present the following, to the Bank's satisfaction: (i) a plan for specific training in financial management and procurement for personnel at the technical operator and the FENOGE trust who are assigned to execute the program; and (ii) the Environmental and Social Management Plan (ESMP), prepared in accordance with the measures and guidelines set out in the Environmental and Social Management Framework (ESMF) (paragraph 2.11).
- 3.4 The MME, through the program coordinator, will contract a technical operator who will be responsible for operational management of the program. The technical operator will handle relations with users and ensure compliance with the procedures and criteria set out in the program Operating Regulations (paragraph 3.5) for execution. The technical operator will issue requests for proposals from equipment suppliers based on the established technical scope, replace the end-user equipment, record program progress in terms of delivery of equipment and disbursements, invoice end-users and collect the respective payments, follow the procedures for transferring resources to FENOGE, assign the appropriate human and budget resources needed to prepare and supervise implementation of the ESMP measures applicable to the final disposal of the equipment replaced under the program and to the process of installing the generation equipment financed by the program, lead the social management and communication plan, and prepare a report on consumption changes as the program progresses. As a special contractual condition of execution precedent to the startup of the activities planned under components 1 and 2 of the program, the executing agency will present evidence, to the Bank's satisfaction, of the formalization of a subsidiary agreement between the executing agency and the program's technical operator, in accordance with terms previously agreed upon with the Bank.
- 3.5 **Program Operating Regulations.** Program execution will be governed by the provisions of the program Operating Regulations, which will be consistent with the current regulation of FENOGE. During execution, the Operating Regulations may be modified with a written statement of no objection from the Bank. The Operating Regulations will include all procedures to be used during the program execution and will contain a financial section with the terms and conditions of the lending mechanism to be implemented under Component 1 and the technical coordination arrangements between the MME, FENOGE, and the program's technical operator. The Operating Regulations will include, inter alia: (i) a detailed execution plan for Component 1, including criteria for the selection and prioritization of beneficiaries, technical criteria for the removal and installation of equipment, protocols for the delivery of equipment and property rights, criteria and obligations related to the use of the lending mechanism; (ii) institutional and operational roles and responsibilities of the entities involved; (iii) intervention strategy; (iv) rules and procedures for the selection and procurement of works,

goods, and services, including those related to the technical operator; (v) rules and procedures for administrative and financial management; (vi) procedures for monitoring; (vii) the flow of information between FENOGE, the technical operator, and the MME for the preparation of reports; and (viii) the measures, actions, and procedures established in the ESMF, which will be attached as an annex to the Operating Regulations. **A special contractual condition precedent to the first disbursement will be the entry into force of the program Operating Regulations previously agreed upon with the Bank.**

- 3.6 **Procurement of works, goods, and consulting services.** Procurements will be carried out in accordance with the Bank policies contained in documents GN-2349-9 and GN-2350-9. No exceptions to these policies are anticipated, country procurement systems will not be used, and local rules and regulations will not apply.
- 3.7 **Audits.** During the loan disbursement period, the MME will submit the program's audited annual financial statements to the Bank within 120 days after the end of the fiscal year. The audit will be conducted by independent auditors acceptable to the Bank. Its scope and other related issues will be determined in accordance with the Guide to Financial Management for Projects Financed by the IDB (document OP-273-6) and the Guidelines for Financial Reports and External Audits. Audit costs will be covered by the program resources, and the MME will be responsible for contracting the audit firm.

B. Summary of results monitoring arrangements

- 3.8 **Monitoring and evaluation.** The program has a [monitoring and evaluation plan](#). The monitoring and evaluation arrangements will include: (i) a [procurement plan](#); (ii) a [multiyear execution plan](#); (iii) annual work plans; (iv) annual verification of fulfillment of the targets established in the [results matrix](#) (Annex II); and (v) semiannual reports that will include: (a) the activities carried out over the period, progress made in execution, problems encountered and how to resolve them; (b) evaluation of the results matrix, procurement plan, annual work plans, and risk analysis, and (c) analysis of the Bank's project monitoring report, which will assess the fulfillment of the output and outcome targets in the results matrix. Execution of the activities carried out in that period will be evaluated, and plans for the following six-month period will be included.
- 3.9 The MME will prepare reports on the status and completion of program activities, in coordination and with the support of the technical operator and the FENOGE trust. Using the loan proceeds, the MME will contract consultants for the following evaluations: (i) a midterm evaluation, when 50% of the program resources have been disbursed and substantiated, or by month 30 of program execution, whichever occurs first, to analyze the progress made, key coordination and execution issues, degree of fulfillment of contractual obligations, and recommendations for achieving the proposed targets and sustainability of the investments, which will assist the MME with making any strategic and operational adjustments needed to achieve the program objectives; and (ii) a final program evaluation, which will begin six months prior to the last disbursement, to analyze the pilot experience in the archipelago as a source of information for lessons learned to be taken into account in the subsequent use of FENOGE funds and/or other resources provided under similar mechanisms in the country for promoting energy efficiency and renewable energy.

- 3.10 The program includes an ex post economic evaluation, along the lines of a cost-benefit analysis, to be conducted by the Bank, similar to the one conducted ex ante (paragraph 2.6). The purpose of this evaluation is to determine whether the socioeconomic benefits were sufficient to recover the investment based on the costs incurred.

Development Effectiveness Matrix				
Summary				
I. Strategic Alignment				
1. IDB Strategic Development Objectives		Aligned		
Development Challenges & Cross-cutting Themes		-Social Inclusion and Equality -Productivity and Innovation -Gender Equality and Diversity -Climate Change and Environmental Sustainability		
Regional Context Indicators		-Greenhouse gas emissions (kg of CO2 e per \$1 GDP (PPP))		
Country Development Results Indicators		-Reduction of emissions with support of IDBG financing (annual million tons CO2 e)*		
2. Country Strategy Development Objectives		Aligned		
Country Strategy Results Matrix				
Country Program Results Matrix		GN-2849	The intervention is included in the 2016 Operational Program.	
Relevance of this project to country development challenges (If not aligned to country strategy or country program)				
II. Development Outcomes - Evaluability		Evaluable	Weight	Maximum Score
		8.6		10
3. Evidence-based Assessment & Solution		8.4	33.33%	10
3.1 Program Diagnosis		3.0		
3.2 Proposed Interventions or Solutions		2.4		
3.3 Results Matrix Quality		3.0		
4. Ex ante Economic Analysis		10.0	33.33%	10
4.1 The program has an ERR/NPV, a Cost-Effectiveness Analysis or a General Economic Analysis		4.0		
4.2 Identified and Quantified Benefits		1.5		
4.3 Identified and Quantified Costs		1.5		
4.4 Reasonable Assumptions		1.5		
4.5 Sensitivity Analysis		1.5		
5. Monitoring and Evaluation		7.5	33.33%	10
5.1 Monitoring Mechanisms		2.5		
5.2 Evaluation Plan		5.0		
III. Risks & Mitigation Monitoring Matrix				
Overall risks rate = magnitude of risks*likelihood		Medium		
Identified risks have been rated for magnitude and likelihood		Yes		
Mitigation measures have been identified for major risks		Yes		
Mitigation measures have indicators for tracking their implementation		Yes		
Environmental & social risk classification		B		
IV. IDB's Role - Additionality				
The project relies on the use of country systems				
Fiduciary (VPC/FMP Criteria)		Yes	Financial Management: Budget, Treasury, Accounting and Reporting, External control, Internal Audit. Procurement: Information System, Shopping Method, Contracting individual consultant, National Public Bidding.	
Non-Fiduciary		Yes	Strategic Planning National System, Monitoring and Evaluation National System.	
The IDB's involvement promotes additional improvements of the intended beneficiaries and/or public sector entity in the following dimensions:				
Gender Equality				
Labor				
Environment				
Additional (to project preparation) technical assistance was provided to the public sector entity prior to approval to increase the likelihood of success of the project		Yes	In order to support the program's design and structure, technical cooperation resources from the CTF Fund, in the amount of US\$552,000 (CO-T1553), were approved in August, 2014.	
The ex-post impact evaluation of the project will produce evidence to close knowledge gaps in the sector that were identified in the project document and/or in the evaluation plan				

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

The generation of energy produced in the San Andrés, Providencia and Santa Catalina Archipelago (SAPSC) depends almost entirely of fossil fuels. This leads to a high rate of greenhouse gases (GHG) emission, a high costs of energy generation, and, consequently, to a high cost of electric service to users, which is subsidized. Equipment inefficiencies for residential, commercial and industrial use, exacerbate the high costs of energy generation and electric service provision. Given these factors, the operation seeks to reduce GHG emissions in SAPSC's non-interconnected areas (ZNI) through the reduction in electricity consumption (GWh/year) of residential customers and the financial sustainability of the power sector in the Archipelago, linked to the reduction of applied subsidies.

To this end, two components are structured within the program logic: i) efficient mechanism for energy demand management; and ii) environmental sustainability plan, communication and social management. The results matrix reflects the operation's vertical logic, and is well formulated overall.

The economic evaluation consists of a cost-benefit analysis in which benefits arise from the reduction of CO2 per year (7.2% annually), as well as from savings in government subsidies, resulting in a simple return of 5.7 years for the investment of US \$ 10 million, achieving a 12.5% IRR and a positive ENPV. The sensitivity analysis identified four variable categories: i) penetration of the program on each user segment and technology; ii) financial variables such as discount rates, TRM,% portfolio and post consumer costs; iii) savings potential by technology; and iv) cost of each technology. The highest sensitivity was evident in the penetration of the official segments, commercial and residential, consistent with the level of consumption and subsidies related to these.

The operation has been defined as medium risk. A low demand for resources by program beneficiaries has been identified as high risk due to users' lack of knowledge, this risk has a medium probability of occurrence. Mitigation measures were identified in line with the products of the second component. Medium risks present individual mitigation measures.

RESULTS MATRIX				
Objective	The general objective of the program is to reduce greenhouse gas emissions in non-interconnected zones, by optimizing demand-side management of electricity in the San Andrés, Providencia, and Santa Catalina Archipelago, in order to improve its energy, economic, and environmental sustainability. The program includes: (i) a mechanism for efficient demand-side management; (ii) an environmental sustainability, communication, and social management plan; and (iii) an administration component.			
Indicators	Units	Baseline 2015	Target Year 10	Means of verification
Impact				
Reduction in greenhouse gas emissions ¹ in the San Andrés, Providencia, and Santa Catalina Archipelago.				
Equivalent carbon dioxide emissions in tons per year in the San Andrés, Providencia, and Santa Catalina Archipelago.	Tons of carbon dioxide/year	147,727	137,892	Annual reports prepared by the program's technical operator and approved by the Ministry of Mines and Energy (MME). Reports include the energy consumption of beneficiary users and the calculation of avoided emissions, based on the energy savings obtained.
Outcomes²				
Outcome: An 8.5% reduction in the average per-user electricity consumption (GWh/year) among residential customers who implemented energy efficiency measures in the San Andrés, Providencia, and Santa Catalina Archipelago. ³				
Average electricity consumption (GWh/year) of targeted residential customers in the San Andrés, Providencia, and Santa Catalina Archipelago.	GWh/year/user	220	206	Annual reports prepared by the program's technical operator and approved by the MME. Reports include the energy consumption of beneficiary users.
Outcome: Improvement of the financial sustainability of the electricity sector in the San Andrés, Providencia, and Santa Catalina Archipelago.				
Subsidies associated with electricity, issued by the Colombian government.	US\$/year (million)	40.4	38.1	MME resolutions authorizing annual disbursement of subsidies associated with electricity produced in non-interconnected zones.

¹ Greenhouse gas emissions calculated in equivalent carbon dioxide emissions.

² Projections of the indicator's behavior in year 10 without the project will be used as the baseline, based on the cost-benefit analysis of the operation. [Economic evaluation](#), Table 1.

³ The consumption indicator is the per-user average, and is therefore not disaggregated by user type. Energy savings will mostly be achieved in tiers 1-3, groups with less ability to pay, who comprise 90% of the expected beneficiaries. [Economic evaluation](#), Table 4. Of these, nearly 40% are expected to be from the Raizal community.

Outputs	Unit	Targets						Means of verification
		Year 1	Year 2	Year 3	Year 4	Year 5	Final	
Component 1. Efficient demand-side management program								
1.1 Users benefited by energy efficiency measures ⁴								
1.1.1 Residential Raizal residential users ⁵	User	244	299	1,119	1,358	1,620	4,640	Semiannual status reports on the program prepared by the operator and approved by the MME.
		60	89	447	543	648	1,787	
1.1.2 Commercial	User	16	16	66	66	66	230	
1.1.3 Industrial	User	0	0	0	0	0	0	
1.1.4 Government	User	3	3	11	11	11	39	
1.2 Users benefited by photovoltaic solar power solutions								
1.2.1 Industrial	User	2	2	8	8	8	28	
1.2.2 Government	User	1	2	6	11	15	35	
Component 2. Communication strategy and environmental and social management plan ⁶								
2.1 Comprehensive environmental and social awareness-raising plan implemented in the San Andrés, Providencia, and Santa Catalina Archipelago.	Plan					1	1	Annual reports on the program prepared by the operator and approved by the MME. Copy of the environmental permit for the storage and final disposal of the replaced equipment, and record of the number of units sent for final disposal. Copy of proceedings of energy efficiency training events held at schools, community centers, etc.
Milestones								
Comprehensive environmental and social awareness-raising plan designed.	Plan	1					1	
Annual implementation of the comprehensive environmental and social awareness-raising plan in the San Andrés, Providencia, and Santa Catalina Archipelago.	Implementation plan per year	1	1	1	1	1	5	
2.2. Program promotion and communication strategy implemented in the San Andrés, Providencia, and Santa Catalina Archipelago.	Strategy				1		1	

⁴ Energy efficiency measures are understood as those that reduce electricity consumption through technological upgrades, by replacing refrigeration, ventilation, and lighting equipment with more efficient models in terms of energy consumption, for residential, commercial, industrial (small and mid-sized hotels), and government users. 'User' refers to an individual electrical connection to the grid.

⁵ Most Raizal users are in tiers 1-3, with more favorable financial conditions for participating in the energy efficiency program than other sectors and tiers.

⁶ The communication strategy and environmental and social management plan include a comprehensive environmental and social awareness-raising plan, a program promotion and communication strategy, and a training plan for energy efficiency technicians. These outputs will be executed by the program operator, with defined execution timetables. The outputs will be considered delivered when the milestones established in those timetables have been reached.

Outputs	Unit	Targets						Means of verification
		Year 1	Year 2	Year 3	Year 4	Year 5	Final	
Milestones								Copy of attendance records of the technicians trained. Record of promotional activities such as brochures, radio, press, etc.
Program promotion and communication strategy designed.	Plan	1					1	
Annual implementation of the program promotion and communication strategy in the San Andrés, Providencia, and Santa Catalina Archipelago.	Annual implementation of the program	1	1	1	1	1	5	
2.3. Training plan for energy efficiency technicians in the San Andrés, Providencia, and Santa Catalina Archipelago. ⁷	Plan		1				1	

⁷ It is expected that at least 40% of the individuals who receive training will be from the Raizal community, and that 50% will be women.

FIDUCIARY AGREEMENTS AND REQUIREMENTS

Country: Colombia
Project number: CO-L1119
Name: Efficient Demand-Side Management of Energy in Non-Interconnected Zones – San Andrés, Providencia, and Santa Catalina Archipelago Pilot Program
Executing agency: Ministry of Mines and Energy (MME)
Prepared by: Miguel A. Orellana, Lead Fiduciary Specialist in Financial Management; and Gabriele del Monte, Lead Fiduciary Specialist in Procurement

I. EXECUTIVE SUMMARY

- 1.1 The executing agency will be the Ministry of Mines and Energy (MME). The assessment of the MME's fiduciary management capacity was conducted in February 2014, as part of the preparation of loan operation CO-L1140, Program for Institutional Strengthening of the Mining and Energy Sector. The tools used for this assessment were the Institutional Capacity Assessment System, and an analysis of the principal institutional processes. The assessment concluded that the MME has sufficient capacity to perform financial management, resource administration, and procurement activities for the program. The MME's fiduciary risk in both financial management and procurement is medium.
- 1.2 According to the current Public Expenditure and Financial Accounting evaluation (2009), Colombia's public financial management system is a mature system that performs well in most areas. The MME's procurement activities are governed by the national regulations applicable to public entities, using the Public Procurement System, which is satisfactory from the regulatory standpoint and in line with internationally accepted practices, but its use has not yet been authorized for Bank financing. The MME uses the Integrated Financial Information System (SIIF Nación II) for budget, accounting, and treasury control, all of which is online.

II. FIDUCIARY CONTEXT OF THE EXECUTING AGENCY

- 2.3 The MME will maintain the program's accounts in the SIIF Nación II information system and will appoint a program coordinator who will be responsible for monitoring the operational and fiduciary management of the program by coordinating activities with: (i) the Fund for Alternative Energy and Efficient Management of Energy (FENOGÉ), which will administer the funds through a contracted trustee; and (ii) the program's technical operator, who will be contracted by the executing agency to handle operational execution of the program, manage relations with users, and ensure compliance with the procedures and criteria set out in the program Operating Regulations for execution.
- 2.4 The MME keeps all of the institution's activities documented, approved, and formalized through an information system that can be referred to and consulted

by the organization's entire staff. The internal control system is adequate, and external oversight is carried out by the Office of the Comptroller General of the Republic (CGR). To date, the MME does not have experience in the execution of multilateral banking projects.

- 2.5 With respect to procurement, the MME has appropriately assigned functions for administering procurement processes in the pre contract, contract, and post contract stages. The MME does not have procedures or instructions applicable to procurement processes financed by multilateral banks. Nonetheless, procurement processes will be carried out by the program's technical operator.
- 2.6 There is job stability among staff members involved in the handling of procurement processes. The procurements for which the MME is responsible is processed with the participation of the Contract Management Group, which reports to the Administrative and Finance Office.

III. FIDUCIARY RISK EVALUATION AND MITIGATION ACTIONS

- 3.1 Based on the evaluation and identified level of risk, the following mitigation actions are proposed:

A. Financial management

- 3.2 Development and entry into force of the program Operating Regulations, which contain details on interagency procedures and mechanisms for execution, and the financial section with the terms and conditions previously approved by the Bank. The program Operating Regulations will include all of the procedures to be used during the execution of the program and will contain a financial section with the terms and conditions of the financial lending mechanism to be implemented under Component 1 and the technical coordination arrangements between the MME, FENOGE, and the program's technical operator. In particular, the program Operating Regulations will include: (i) a detailed execution plan, including the technical criteria for the equipment to be removed and installed, criteria for the selection and prioritization of beneficiaries, protocols for the delivery of equipment and property rights; criteria and obligations related to the use of the lending mechanism; (ii) institutional and operational roles and responsibilities of the entities involved; (iii) intervention strategy; (iv) rules and procedures for the selection and procurement of works, goods, and services, including those related to the technical operator; (v) rules and procedures for administrative and financial management; (vi) procedures for monitoring; (vii) the flow of information between FENOGE, the technical operator, and the MME for the preparation of reports; and (viii) the measures, actions, and procedures established in the ESMF and ESMP.
- 3.3 Appointment of a general program coordinator working exclusively on the execution of the program, who will coordinate all technical and operational aspects of execution in an integrated manner. The coordinator will ensure strict compliance with the terms set forth in the program Operating Regulations. In particular, the coordinator will be responsible for the formulation, procurement, execution, and monitoring of all of the projects and activities to be financed, including the commissioning of the required audits. To this end, the coordinator will coordinate the program activities with FENOGE, the technical operator, entities involved in the program, and other government agencies.

B. Procurement

- a. Support for the program's technical operator provided by an official/consultant with experience in Bank-financed procurement, as well as training in IDB procurement procedures, provided by the Bank for the operator's working team.
- b. Training for the working team of the FENOGE trustee, in financial management, IDB procurement procedures, and use of the Procurement Plan Execution System (SEPA) tool.
- c. Agreement with the Bank on a detailed and complete flow chart of interventions and approvals involved in the procurement and contract management process.

IV. CONSIDERATIONS FOR THE SPECIAL PROVISIONS OF CONTRACTS

- 4.1 **Special conditions precedent to the first disbursement:** (i) that regulations have been established for FENOGE and the entity that will act as its trustee has been selected; (ii) that the program coordinator has been appointed in accordance with terms previously agreed upon with the Bank; and (iii) that the program Operating Regulations previously agreed upon with the Bank have entered into force and include the financial section under the terms and conditions previously approved by the Bank, and the technical coordination arrangements between FENOGE, the technical operator, and the MME.
- 4.2 **Special contractual conditions of execution:** Prior to the launch of the activities identified in Component 1 of the program, the executing agency will submit the following, to the Bank's satisfaction: (i) the specific training program approved by the Bank, on financial management and procurement for personnel at the technical operator and the FENOGE trust who are assigned to execute the program; and (ii) the Environmental and Social Management Plan, prepared in accordance with the measures and guidelines set out in the Environmental and Social Management Framework. Prior to the launch of the activities identified in Component 1 of the program, the executing agency will present evidence, to the Bank's satisfaction, of the formalization of a subsidiary agreement between the executing agency and the program's technical operator, in accordance with the terms previously agreed upon with the Bank.
- 4.3 The executing agency will submit expense vouchers using the exchange rate for converting funds disbursed in U.S. dollars to Colombian pesos (**monetization rate**).
- 4.4 The executing agency will submit the program's audited financial statements on an annual basis.

V. AGREEMENTS AND REQUIREMENTS FOR PROCUREMENT EXECUTION

- 5.1 A Bank-approved training plan on procurement and the use of the SEPA tool will be prepared for personnel assigned to program execution at the technical operator and the FENOGE trustee.
- 5.2 The procurement policies applicable to this loan are those contained in documents GN-2349-9 and GN-2350-9.

- a. Procurement execution. Before procurement starts, the procurement plan for the first 18 months must be recorded in the SEPA, and kept up to date by the MME.
- b. The relevance of expenditures, i.e., the terms of references, technical specifications, bidding documents, and budget, are the responsibility of the program's sector specialist and always require prior no objection before initiating the procurement process, and in accordance with the operational criteria of the Project Team Leader.

1. Procurement of works, goods, and nonconsulting services

- 5.3 Contracts generated and subject to international competitive bidding (ICB) and national competitive bidding (NCB) will be executed using the respective bidding documents harmonized for Colombia and agreed upon with the Bank.

2. Procurement of information technology systems

- 5.4 No comment.

3. Selection and contracting of consultants

- 5.5 (a) **Consulting firms:** Consulting firms will be selected and contracted using the harmonized standard request for proposals for Colombia and agreed upon with the Bank. Firms selected through direct contracting will be identified in the procurement plan and duly justified.

(b) **Selection of individual consultants:** Individual consultants will be selected and contracted in accordance with the Bank's procurement policies. According to Section V of the Bank's policies in document GN-2350-9, use of the short list is not required, nor is the standard request for proposals used.

(c) **Training:** Direct contracting will be used when the individual purchase is less than US\$5,000. For larger amounts, procurement will be based on the relevant competitive methods.

4. Advance procurement/Retroactive financing

- 5.6 Not applicable.

5. Table of thresholds

Works*		Goods*		Consulting services	
ICB	NCB	ICB	NCB	International publicity	Short list 100% national
≥ US\$10 million	US\$350,000 - US\$10 million	≥ US\$1 million	US\$50,000 - US\$1 million	≥ US\$200,000	≤ US\$500,000

* Simple works and off-the-shelf goods valued at below the ICB threshold may be procured through shopping.

6. Main procurement items

- 5.7 Procurements for the first 18 months are reflected in the procurement plan (IDBDOCS #39872044), and are not so technically or procedurally complex that they merit special mention.

- 5.8 **Recurrent costs:** The costs of all program personnel may be included in this category. They will be contracted according to the executing agency's internal regulations and national legal standards that are consistent with IDB policies.

7. Procurement supervision

- 5.9 The initial review method is ex ante. However, contracting of individual consultants and shopping for goods and nonconsulting services will be reviewed on an ex post basis once the executing agency has carried out one of each of these procurements to the Bank's satisfaction. Application of the ex post review modality will be evaluated, in coordination with the executing agency, during execution of the loan. If the ex post review modality is used, reviews will take place every 12 months in accordance with the program's supervision plan.
- 5.10 The ex post review reports will not provide for physical inspection visits.

Threshold for ex post review		
Works	Goods	Consulting services
Less than US\$10 million*	Less than US\$1 million*	Less than US\$200,000*

Except for direct contracting procurements, which will be reviewed ex ante.

8. Records and files

- 5.11 The MME has filing systems that contain complete and organized documentation on procurement processes in all pre contract, contract, and post contract stages. In accordance with record-keeping rules, physical documents must be kept for some 20 years. The MME directly handles inactive records, which are administered using controlled document retention tables.

VI. FINANCIAL MANAGEMENT AGREEMENTS AND REQUIREMENTS

1. Programming and budget

- 6.1 The national government, through the National Public Budgeting Directorate (DGPPN) and the National Planning Department (DNP), is responsible for budgetary programming, a process that concludes with the approval by Congress of the Annual Budget Act. The loan proceeds will be included in the national general budget under the MME and will be controlled through the SIIF Nación II information system.

2. Accounting and information systems

- 6.2 The lead agency for government accounting in Colombia is the General Accounting Office of the Nation (CGN), which provides guidelines on how to maintain the accounts that comprise the national public budget. The official system for keeping public accounts is the SIIF Nación II, which is the source for accessing information transmitted to the CGN through the Public Financial Information Consolidation System. The MME will use the SIIF Nación II system for the program's budgetary, accounting, and treasury control. The accounting and reporting subsystem of the SIIF Nación II does not generate reports that are itemized or organized by investment category. Accounts will be recorded according to the accrual method; however, the program's audited financial reports will be prepared on a cash accounting basis and will be submitted to the Bank on an annual basis. For recording its operations and preparing its financial

statements, the executing agency uses the standards prescribed by the CGN, and for any matters not established therein it uses the generally accepted accounting practices in Colombia set forth in Decree 2649 of 1993.

3. Disbursements and cash flow

- 6.3 Funds from external sources, as well as other funds from the national government, are executed through SIIF Nación II. For the program's treasury management, the MME will open a special bank account (designated account) in foreign currency at Banco de la República (central bank) in the program/FENOGE name, to be used exclusively for program/FENOGE funds. Funds will be drawn from this special account for the contracted trustee, which will manage them in an account set up for the exclusive use of the program. The disbursement method will be fund advances, based on liquidity needs for a maximum period of six months; and accounting for advances will be in accordance with the provisions of document OP-273-6, the financial management policy for IDB-financed projects. In addition to projected cash flow, the disbursement request should be accompanied by the reconciliation of the special account and the implementation status of technical and fiduciary performance commitments (as applicable). Documentation of expenditures will use the **monetization rate**. The special conditions precedent to the first disbursement are described in detail in Section IV.

4. Internal control and internal audit

- 6.4 The MME has an internal control office. The Ministry's internal control is based on the applicability of the public model for internal control, 2005-MECI, and the principles of self-regulation, self-management, self-control, and continuous improvement. It has an institutional code of values and a defined vision, mission, annual work plan, indicators, and standards. The office has professional staff to carry out its tasks and participates in the monitoring process as part of plans for improving external audits of the CGR. Internal audit activities are carried out in accordance with auditing standards. The MME's internal control office does not review the agency's investment projects. Internal and external audit reports have determined that internal control is adequate.

5. External control and reports

- 6.5 The external control of the MME is carried out by the CGR, through public audits performed on a selective and ex post basis, in order to verify compliance with standards, the proper use of resources, the observance of processes and procedures, the attainment of targets and objectives, etc. Given that the CGR is not currently eligible to audit Bank-financed projects, the program will use the services of an independent auditing firm.
- 6.6 The financial statements and the eligibility of program expenses will be audited by an independent auditing firm acceptable to the Bank, which will be contracted by the MME. Audit services will be financed using the loan proceeds. The program's audited financial statements will be prepared annually and sent to the Bank no later than four months after the close of each fiscal year, in accordance with previously agreed upon procedures and terms of reference. The reports to be required will be those established in the terms of reference, including the review of procurements in addition to the Bank's actions and reviews. A private independent auditing firm will be required to audit this operation, in order to

guarantee the frequency and content of the opinions in accordance with the procedures established in document OP-273-6.

- 6.7 There is no national policy on public disclosure of audit reports. However, according to the current access to information policy, the audited program reports will be published in the Bank's systems.

6. Financial supervision plan

- 6.8 Based on the results of the capacity assessment, the financial specialist will perform at least one on-site review per year and desk reviews of the audited annual and final financial statements. Financial supervision will be conducted on an ex post basis for the MME. The program auditor will verify that funds are executed according to Bank rules and policies on fiduciary management and the conditions stipulated in the program Operating Regulations. The supervision plans should contain a minimum of the following actions: (i) two annual visits by the external auditing firm to perform a comprehensive audit of the disbursement processes, including the FENOGE trustee and the program's technical operator; (ii) one on-site visit to the places where the loan proceeds are invested; and (iii) one visit to verify compliance with the recommendations from the internal audit performed by the program's external auditor. The fiduciary supervision visits on financial management will include, inter alia, verification of the financial and accounting arrangements used for program administration.

7. Execution mechanism

- 6.9 The borrower will be the government of Colombia. The executing agency will be the MME, and the resources will be channeled through the Fund for Alternative Energy and Efficient Management of Energy (FENOGE). The MME will appoint a program coordinator working exclusively on the execution of the program, who will coordinate all technical and operational aspects of execution in an integrated manner. The executing agency will contract the required auditing services. As a special contractual condition precedent to the first disbursement, the MME will appoint the program coordinator.
- 6.10 The program will receive the CTF funds, which will be allocated to FENOGE in a special subaccount at Banco de la República, and subsequently transferred to the trustee for execution. FENOGE will be regulated by the MME and administered by a trust set up under the commercial trust agreement entered into by the MME and a trustee authorized by the Office of the Financial Superintendent of Colombia. The trust and the operating manual will be adapted for execution of the technical and economic proposal developed as part of this program.
- 6.11 The executing agency will contract a technical operator who will be responsible for operational management of the program. This technical operator will issue requests for proposals from equipment suppliers based on the established technical scope, replace the end-user equipment, record program progress in terms of delivery of equipment and disbursements, invoice end-users and collect the respective payments, follow the procedures for transferring resources to FENOGE, assign the appropriate human and budget resources needed to prepare and supervise implementation of the ESMP measures applicable to the final disposal of the equipment replaced under the program and to the process of installing the generation equipment financed by the program, lead the social

management and communication plan, and prepare a report on consumption changes as the program progresses.

- 6.12 More information on the execution mechanism can be found in the proposal and the program Operating Regulations.

8. Other financial management agreements and requirements

- 6.13 There are no agreements other than those described above. However, the fiduciary agreements and requirements included in this annex may be adjusted as the program progresses, based on updates of the risk analysis and institutional capacity assessment conducted during execution of the program.

**EFFICIENT ENERGY DEMAND MANAGEMENT IN NON INTERCONNECTED ZONES (ZNI) –
SAN ANDRES, PROVIDENCIA AND SANTA CATALINA PILOT**

CO-L1119

CERTIFICATION

The Grants and Co-Financing Management Unit (ORP/GCM) certifies that the operation received the letter of commitment for financing by the Clean Technology Fund (CTF) for the amount of up to **US\$10,000,000** confirmed by Goritza Ninova, July 18, 2016

Original Signed

Sonia M. Rivera

Chief

Grants and Co-Financing Management Unit
ORP/GCM

07/26/2016

Date

DOCUMENT OF THE INTER-AMERICAN DEVELOPMENT BANK

PROPOSED RESOLUTION DE-___/16

Colombia. Loan ____/TC-CO to the Republic of Colombia
Efficient Energy Demand Management in
Non-Interconnected Zones – San Andrés,
Providencia, and Santa Catalina
Archipelago Pilot Program

The Board of Executive Directors

RESOLVES:

That the President of the Bank, or such representative as he shall designate, is authorized, in the name and on behalf of the Bank, as Administrator of the Clean Technology Fund, hereinafter the “Fund”, to enter into such contract or contracts as may be necessary with the Republic of Colombia, as Borrower, for the purpose of granting it a financing to cooperate in the execution of an efficient energy demand management in non-interconnected zones – San Andrés, Providencia, and Santa Catalina Archipelago pilot program. Such financing will be for an amount of up to US\$10,000,000, from the resources of the Fund, and will be subject to the Financial Terms and Conditions and the Special Contractual Conditions of the Project Summary of the Loan Proposal.

(Adopted on __ ____ 2016)

LEG/SGO/CAN/IDBDOCS#40402371
CO-L1119