GEF-6 REQUEST FOR ONE-STEP MEDIUM-SIZED PROJECT APPROVAL

TYPE OF TRUST FUND: GEF Trust Fund

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PART I: PROJECT IDENTIFICATION

Project Title:	Public Lighting Energy Efficiency Program: Public lighting replacement of low-efficiency VSAP bulbs with high-efficiency LEDs in Colombia		
Country(ies):	Colombia	GEF Project ID:[1]	
GEF Agency(ies):	IADB (select) (select)	GEF Agency Project ID:	CO-X1020
Other Executing Partner(s):	FINDETER	Submission Date:	11/24/2015
GEF Focal Area(s):	Climate Change	Project Duration (Months)	36
Integrated Approach Pilot	IAP-Cities ☐ IAP-Commodities ☐ IAP-Food Security ☐		
Name of Parent Program:	[if applicable]	Agency Fee ($)	189,952

A. FOCAL AREA STRATEGY FRAMEWORK AND PROGRAM[2]:

Focal Area Objectives/programs	Focal Area Outcomes	Trust Fund	(in $)	
			GEF Project Financing	Co-financing
(select) CCM-1 Program 1 (select)	Outcome A. Accelerated adoption of innovative technologies and management practices for GHG emission reduction and carbon sequestration Outcome C. Financial mechanisms to support GHG reductions are demonstrated and operationalized	GEFTF	1,999,725	25,850,000
	Total project costs		1,999,725	25,850,000

B. PROJECT FRAMEWORK

Project Objective: The proposed project aims to support the design of a 4-pronged strategy to reduce technical barriers and information gaps, as well as real or perceived risks that have impeded the success of Energy efficiency Public lighting projects, more specifically in EE street lighting investment projects.

Project Components/ Programs	Financing Type[3]	Project Outcomes	Project Outputs	Trust Fund	(in $)	
					GEF Project Financing	Confirmed Co-financing
1. Technical assistance and legal mechanisms	TA	Characteristic definitions of the project agreed by stakeholders Contribute to the Public Lighting EE Legal national and local framework and legal support for the municipalities Legal framework requirements clarified	Analysis of Energy Services providers and technologies in the Colombian market and a proper database. Market study and analysis of different financial tools or mechanisms available. At least two Technical documents on Public Lighting EE such as minimum technical requirements for contracts.	GEFTF	730,000	500,000

[1] Project ID number will be assigned by GEFSEC and to be entered by Agency in subsequent document submissions.
[2] When completing Table A, refer to the excerpts on *GEF 6 Results Frameworks for GETF, LDCF and SCCF*.
[3] Financing type can be either investment or technical assistance.

2. Financial mechanism	TA	Municipal level projects approved with FINDETER financing to replace at least 89,286 lamps Mitigation of at least 100,804 tons of CO2 equivalent	Development of at least one innovative financial mechanisms through a credit line. Implementation (including dissemination) of at least one legal mechanism based on the Study of the Component 1 Support the structuring of at least 2 projects to make them viable and sustainable. As well for those that need support to achieve a financial closure.	GEFTF	850,000	25,000,000
3. Monitoring, Report and Evaluation	TA	Monitoring and evaluation mechanisms for Public Lighting EE established. Monitoring and evaluation of the project in place.	Validation templates and evaluation criteria for suppliers developed. Proposal of integration of the Monitoring and evaluation mechanism for Public Lighting EE projects with National Low Carbon Development MRV system. Progress and final reports	GEFTF	230,000	300,000
4.Capacity building and Communication Mechanisms	TA	Stakeholders accesing information Street lighting project development	Communication strategy and action plan. Number of visits to the website platform.	GEFTF	94,500	10,000
			Subtotal		1,904,500	25,810,000
			Project Management Cost (PMC)[4]	GEFTF	95,225	40,000
			Total GEF Project Financing		1,999,725	25,850,000

C. SOURCES OF CO-FINANCING FOR THE PROJECT BY NAME AND BY TYPE

Please include confirmed co-financing letters for the project with this form.

Sources of Co-financing	Name of Co-financier	Type of Co-financing	Amount ($)
Recipient Government	FINDETER	Loans	25,850,000
Total Co-financing			0

[4] For GEF Project Financing up to $2 million, PMC could be up to10% of the subtotal; above $2 million, PMC could be up to 5% of the subtotal. PMC should be charged proportionately to focal areas based on focal area project financing amount in Table D below.

D. GEF/LDCF/SCCF RESOURCES REQUESTED BY AGENCY(IES), TRUST FUND, COUNTRY(IES), FOCAL AREA AND PROGRAMMING OF FUNDS

GEF Agency	Trust Fund	Country/ Regional/Global	Focal Area	Programming of Funds	(in $)		
					GEF Project Financing (a)	Agency Fee a) (b)	Total (c)=a+b
IADB	GEF TF	Country/Colombia	Climate Change	(select as applicable)	1,999,725	189,952	2,189,677
Total Grant Resources					1,999,725	189,952	2,189,677

a) Refer to the Fee Policy for GEF Partner Agencies.

E. PROJECT'S TARGET CONTRIBUTIONS TO GLOBAL ENVIRONMENTAL BENEFITS[5]

Provide the expected project targets as appropriate.

Corporate Results	Replenishment Targets	Project Targets
1. Support to transformational shifts towards a low-emission and resilient development path	750 million tons of CO_{2e} mitigated (include both direct and indirect)	*100,804metric tons*

F. DOES THE PROJECT INCLUDE A "NON-GRANT" INSTRUMENT? No

G. PROJECT PREPARATION GRANT (PPG)[6]

Is Project Preparation Grant requested? Yes ☐ No ☒

[5] Provide those indicator values in this table to the extent applicable to your proposed project. Progress in programming against these targets for the projects, per the *Corporate Results Framework* in the *GEF-6 Programming Directions*, will be aggregated and reported during mid-term and at the conclusion of the replenishment period. There is no need to complete this table for climate adaptation projects financed solely through LDCF and/or SCCF.

[6] PPG of up to $50,000 is reimbursable to the country upon approval of the MSP.

PART II: PROJECT JUSTIFICATION

1. *Project Description.*

Colombia's electricity consumption in 2013 was 64,686 GWh/year based on the Energy and Mining Planning Unit (UPME) of the Ministry of Mines and Energy. Consumption increased around 49% between 2000 and 2013, representing an average annual growth of 5%. The country shows a clear tendency to increase the use of thermal energy for electricity production, moving from 46% to 49% between 2000 and 2013. Therefore the Government of Colombia has established a national goal to reduce consumption of electricity in commercial sectors (including public lighting) through unilateral action by 2.7% by the year 2015 [7].

Street lighting energy usage in Colombia stands at approximately 3% of the country's electricity use, based on 2012 electricity usage of 59,508 GWh[8]. This consumption amounts to 1,785 GWh/year, or 214,228 tons of carbon dioxide equivalent (tCO2e). This energy costs approximately US$290 million a year, mostly covered by municipalities, which in Colombia are responsible for providing street lighting. The country has approximately 1,400,000 public street lamps, of which 610,000 (or 44%) are covered by concession contracts. The majority of these lamps (70%) use High-Pressure Sodium-Vapor (HPSV) technology.

To contribute to the national goal of reducing electricity consumption, in 2014 the Financiera del Desarrollo (FINDETER), a government backed national development bank, launched a special financing line to finance investments in energy efficiency (EE) in street lighting. At the same time, FINDETER as a second tier bank would lend to local financial institutions (LFIs), which will use these resources to finance loans to final beneficiaries. This special financial line is designed to support efforts to replace HPSV use with more efficient Light-Emitting Diode (LED) technology for the modernization and expansion of lighting services in Colombia. The beneficiaries of this line will be private and public companies, and the local government (e.g., municipalities). In addition to reducing electricity consumption, the projects under this credit line are expected to reduce costs for Colombian municipalities generating an important cash flow, as well as support sustainability and the growth plans of the municipalities.

EE projects in street lighting can be structured mainly under two different schemas: (i) the first scheme is where the municipality applies for financing and hires a provider of EE projects to provide and install the technology; in this case, it would be the municipality that accepts most of the risk of project performance, relying on a series of mechanisms to ensure that the project generates sufficient cash flows to cover costs of investment, operation and financing and (ii) municipality structures a public private partnership (PPP) or concession for the replacement of its street lighting; where the supplier investor or provider of the EE LED street lighting projects (or a third party) makes the investment, and is then receives a return from the savings generated by the project. In this case, most of the risks of project performance are absorbed by the supplier of the EE project and not the municipality.

However, in spite of a very interesting investment opportunity for municipalities and investors, with associated benefits, after the credit line was launched the credit line has not been effectively utilized and the market demonstrated that there were still barriers to the successful implementation of EE in street lighting. Based on initial market assessment studies, carried out by FINDETER and the IDB, on opportunities and barriers to financing EE in the street lighting, it was found that Light emitting diodes (LED) lamps have a high potential to reduce energy consumption, increase the quality of street lighting, and given their lifetime, also reduce operating expenses. The initial capital expense costs of LED technologies are, however, still very high, requiring long term payback periods – particularly as the LED technology is in most cases imported. Market studies carried out by the IDB have shown that international LED technology providers (e.g. LG, Sylvania, MVDlight, Phillips Schreder and BYD, among others) would be willing to produce LED lamps locally and reduce lamps costs considerably if a sufficient scale of investments in new lamps actually materializes.

Those studies have also identified that many of the barriers to accessing credit from a potential financing strategy for EE projects were related to (i) a lack of technical knowledge to evaluate technologies and their

[7] Resolución 18-918 del 2010 del Ministerio de Minas y Energía
[8] UPME. Universidad Nacional . Alumbrado Publico Exterior

performance among LFIs and final beneficiaries (e.g., lack of technical knowledge to evaluate technologies and projects led by responsible agencies of the municipalities; mistrust on the part of investors in the performance of EE projects); (ii) lack of knowledge about the risks and returns in EE LED street lighting projects (e.g., lack of confidence on the part of investors in providers of LED projects, high levels of investment combined with the low creditworthiness of municipalities interested in making this type of investment); and (iii) lack of a clear legal framework for PPPs (i.e., prior contractual commitments, specifically the concession contracts for administration, operation and maintenance (AOM) of municipal systems of street lighting; change of administrations in the towns).

To tackle these barriers and unlock the potential of FINDETER's financing line to generate local and global benefits, the line of credit needs to be accompanied by a set of mechanisms that address: (i) the aforementioned knowledge gaps, (ii) any real or perceived risks, and (iii) the need for the results of the projects financed to be reflected in the limited legal and contractual framework for PPPs between the actors, energy savings and GHG emission reductions.

The proposed project, with GEF funding, aims to support the design of a 4-pronged strategy to reduce and mitigate several barriers and risks associated with the two kinds of financing schemes for EE LED street lighting projects described above that have impeded the success of investment and the current credit line and, at the same time, create market conditions that will stimulate the demand for this type of project investment, on the part of both the municipalities and the private sector and create trust between the actors involved. It is expected that overcoming these constraints will generate an increased demand for EE financing, which will enable FINDETER to place at least US$25 million in loans to municipalities/financial intermediaries/energy services providers for the conversion to more efficient street lighting systems, leading to a reduction in the emission of GHG of at least 11,521 tons of CO_2 equivalent per year. The strategy will be implemented in each of the four components through the development of tools to address technology and performance risks, as well as risks associated with energy services companies. In Colombia, there has been no comprehensive program such as the one proposed. Therefore, this project could set the tone for the structuring of a comprehensive Program of financing for street lighting projects.

The elements of this package include, in particular: technical support in energy savings guarantees and insurance of energy savings, standardized contracts, and a third-party validation and verification and capacity building. These components are:

Component 1: Technical assistance and legal mechanisms. Address technical and legal barriers and the lack of knowledge, about risks, performance of EE for street lighting, among LFIs and beneficiary firms in order to gain access to credit for the implementation of EE projects in public lighting. In addition, the component will support the legal structuring of projects and facilitate negotiations between the various actors (PPPs). Among the tasks that would be accomplished through this component, the most important ones are the following:

- Development of a document on energy efficiency criteria in selecting and contracting LED lighting technology for street lighting, with specific criteria and minimum technical requirements, for LED technology suppliers and contractors participating in the projects.
- Evaluate and improve a methodology for assessing eligible projects, including how to present a technical and economical proposal.
- Support with the definition of technical features for projects where municipalities are responsible for the operation of street lighting.
- Analysis of the different actors in the public and private market, and the conditions and agreements required for proper promotion of the financing line through FINDETER, including those specifically related to potential beneficiaries (Municipalities) and Energy Services Companies (ESCOs, Association of Experts in Energy Efficiency).
- Generate the specific technical capacities needed within FINDETER to coordinate and promote the financing strategy, including the assessment of project eligibility and the creation of an information system for the monitoring, reporting and validation of project results, among others.

- Strengthen legal advice and legal structuring. This activity seeks to identify what is required to develop a model of a standard contract/agreement between the service provider and the municipality, concession or operator. (i) Analyze and determine legal and institutional requirements, capabilities and qualification of potential concessionaries or operators and different configurations of municipal legal structuring; (ii) develop standard performance contracts where the risks are equally shared by technology providers and beneficiary firms; and (iii) support structuring or modification of current trust payments. The main objective of this activity is to generate a flow of EE projects using LED that can be funded and that will generate trust between all actors by providing advances in the legal structuring of the projects, and by facilitating negotiations.
- Identification of the roles, conditions and agreements/contractual requirements to be fulfilled by potential market players engaged in project development and monitoring, e.g., technology and energy efficiency service providers, insurers of project performance, and project certifiers and verifiers; design of the operational guidelines and mechanisms through which financial intermediaries, technology providers and beneficiary firms apply or benefit from the financing strategy.

Component 2: Financial mechanism. Risk mitigation elements will be designed to make risks attractive to the municipalities and concessionaires or investors to incentivize wide-scale substitution in all interested cities.

Achieving the above would require the following specific activities:

- Adjusting the conditions of the existing line of credit to the specific needs of the EE street lighting program
- Developing innovative financial mechanisms, e.g., development of secure guaranteed savings; insurance to cover the municipality against any possible breach on the part of the supplier for the project arising from poor execution.)
- Development of specific operational guidelines and systems to operationalize the financing strategy and reassure relevant market players that the risks they are assuming are acceptable.
- Technical support for identification of a pipeline of bankable projects, i.e., support for the development of alternative business models, such as alternative energy payment channels, standard contracts, quality control of projects and providers, capacity development of LFIs, etc.).

Component 3: Validation & Monitoring and evaluation mechanisms. Risks on project performance will be mitigated. Activities under this component are for the improvement of operational mechanisms and systems required to monitor the results/benefits of the financing strategy (i.e. reduction of energy use and GHG emission reductions). The assertion of benefits arising from energy savings in the financing line will be a key incentive for municipalities to invest in this type of projects.

To ensure these benefits are tracked and fully accounted for requires specific activities:

- Coordinate and control the proper use of methodologies for assessing eligible projects, presenting result indicators and monitoring whether the goals are being achieved;
- Proposal of specific methods to collect, sample and maintain data relevant to assessing the estimated impact of each financing strategy (e.g. investments, GHG reductions) within the FINDETER system.
- Support the process of data handling necessary to easily share results of the program as a whole with third-party software systems.

The mechanism aims to monitor, validate and generate reports of the performance and impact of the projects. This mechanism will be necessary not only so that FINDETER can monitor the results of the program, but also assess the compliance with contracts between providers of projects and municipalities. The information gathered through this mechanism also will be very valuable for other actors involved in the promotion and funding of EE as financial intermediaries (FIS), insurance companies, or even the same IDB and the GEF.

Component 4: Capacity building and communications

- A key activity supported under this component is a dissemination and promotion strategy to promote outputs and sharing of knowledge generated by the project to key market participants; targeted training

events required for proper promotion of the financing line, including those specifically related to potential beneficiaries (Municipalities) and energy efficiency services providers (Association of Experts in Energy Efficiency) or potential invetsors.

- This strategy will be supported by a website platform to communicate the performance, results, co-benefits and impacts of FINDETER's loan investments (municipality project) that are supported and implemented. FINDETER will be responsible for the technical support and maintenance of the website platform during the project duration.

Global Environmental Benefits: As a result of GEF funding, increased demand for FINDETER financing of EE street lighting is expected to result in replacement of at least 89,286 lamps. The project will contribute to global environmental benefits of a direct emissions reduction of 11,521 tons of $CO2$[9] equivalent per year and Energy savings of 30,803MWh per year through increasing the energy efficiency of street lighting, substituting inefficient light bulbs for Light Emitting Diode (LED) bulbs. Total direct and indirect benefits are estimated at 100,804 metric tons of CO2 equivalent mitigated. Project savings will be tracked using a monitoring and evaluation system that the proposed project will develop.

Innovation: . In order to: (i) promote the scale of investments needed for the price and payback return of LED technologies to become more competitive; and (ii) address non-financial market barriers for investors and LFIs to feel confident in investment returns; IDB, together with FI, Colombia's second tier national development bank (NDB) in charge of supporting sub-national and infrastructural development, has developed a solution that blends different financial and non-financial instruments to that effect. Those instruments include (i) A credit line at adequate terms and conditions for first-tier local financial institutions so that they can in turn provide sub-loans to private sector operators interested in investing in street lighting projects based on LED technology; (ii) Engagement of LFIs in the development of risk sharing mechanisms (insurance) to mitigate the under-performance of LED technology projects and hence of their financial return; (iii) Technical cooperation to support the structuring of concessions and PPPs that make the investments in LED technologies attractive to private investors, including: (iv) Support to municipalities in the development of contract at adequate terms for private sector engagement; (v) Identification and engagement of technology providers and other key market stakeholders that will be required to support the demand for financing through the development of technically-robust, bankable projects; (vi) Development of standards and mechanisms not only to structure sound projects, but also to adequately monitor, report, and verify their results

This project is an attempt to integrate all the current separated and disjointed efforts of the energy services providers, Government and suppliers in Colombia to establish a real local LED industry with technical assistance, standards and monitoring systems

Sustainability: The project would also contribute to (i) increasing energy efficiency by 15 - 50 percent; (ii) providing more energy efficient lighting in all types of regions around the country; (iii) reducing maintenance costs of street lighting; (iv) reducing technology costs; (v) creating options to promote economies of scale in buying bulbs, thus reducing prices; (vi) reducing annual maintenance; (vii) lowering recycling costs for light bulbs and luminaires; (viii) reducing solid and/or special waste; (ix) increasing security in public spaces; (x) generating employment in cities; (xi) installing lighting production capacity in cities and strengthening industry in the country; and (xii) reducing the number of road accidents.

In summary, the projects supported by this solution are expected to reduce the energy costs for Colombian municipalities, generating important cash flows that could eventually support the expansion of the street lighting network in those sub-national entities. The LED technology is also expected to provide better quality of light (brighter), having a positive impact on street safety at night.

Scale-up Potential: When used as part of a carefully designed intervention package that addresses a range of barriers to EE investment in an integrated manner on the basis of a thorough analysis of the national context, the Financial mechanism covering EE performance may overcome important barriers in several markets, in particular markets where EE investments have high potential but the EE market remains relatively weak and would benefit from standardized approaches to scaling up and from targeted risk instruments. Based on the

[9] See details in annex I

results and to assist the demand for this project, FINDETER hopes to expand in the future its line of finance for at least another US$25 million in loans for EE Street Lighting in Colombia.

While the project targets parts of the public sector, the financial mechanism approach may be applied in other sectors provided that the technology solutions are sufficiently standardized to enable determination of the parameters for an insurance instrument.

2. *Child Project?* If this is a child project under a program, describe how the components contribute to the overall program impact.
N/A

3 *Stakeholders.* Will project design include the participation of relevant stakeholders from civil society and indigenous people? (yes ☒ /no☐) If yes, identify key stakeholders and briefly describe how they will be engaged in project design/preparation:

It is important to emphasize that the development and implementation of a program of this nature, with their different mechanisms, will require construction of alliances and coordination of efforts with various public and private bodies. In this context, Findeter, as orchestrator of these mechanisms, will play a crucial role in the construction and articulation of those alliances and efforts as well as in the generation of the necessary trust that must exist between the various actors expected to interact under this program.

Stakeholder	Roles and Responsibilities in Project Preparation	
Government (e.g., national climate change focal point and staff from national/regional climate change offices/departments; environmental, planning and economic ministries and related institutions) Ministry of Mines and Energy, UPME, Ministry of Environment and Sustainable Development, DNP, Ministry of Foreign Affairs	Consultation	Government will be the target for activities related to knowledge dissemination, co-financing of EE projects and the strengthening of technical capacities.
National and regional institutions (e.g., institutions or organizations for energy sectors, universities, colleges and NGOs) Asocars (Asociación de Corporaciones Autónomas Regionales y de Desarrollo Sostenible), ANDI (National Industrial Business Association of Colombia), ANDESCO (Colombian National Association of Public Services and Communications), United States Agency for International Development (USAID), University of Santander, University of the Andes, Julio Garavito Colombian School of Engineering, Pontifical Bolivarian University	Consultation and communication	Stakeholders involved in the development of similar activities and which could cooperate synergistically to avoid duplication of efforts would be consulted.
Financial institutions and private sector (e.g., technology vendors/developers & utilities; project developers, project engineers; private banks, foundations and other funding sources); Contract and procurement law firms and Trust Entities.	Consultation and communication	Stakeholders involved in the development of similar activities and that could cooperate synergistically to avoid duplication of efforts would be consulted.
Insurers (Fiduprevisora, Fiduciaria Bancolombia, SurAmericana de Seguros, etc.)	Consultation and communication	Stakeholders involved in the development of similar activities and that could cooperate synergistically to avoid duplication of efforts would be consulted.

4. *Gender Consideration.* Are gender considerations taken into account? (yes ☐ /no☒). If yes, briefly describe how gender considerations will be mainstreamed into project preparation and implementation, taking into account the differences, needs, roles and priorities of men and women.
N/A

5. *Benefits.* Describe the socioeconomic benefits to be delivered by the project at the national and local levels. Do any of these benefits support the achievement of global environment benefits (GEF Trust Fund) and/or adaptation to climate change?

The project would generate social benefits in terms of employment generation in the country, based on replacing at least 17,857 low-efficiency HPS bulbs in Colombia within five years. The replacement process requires at minimum a crew of four people (a driver, a supervisor and two operators) able to gradually phase in on average 25 lamps per day, generating 571 direct jobs/days per year. Additionally indirect jobs would be generated related to the management and auditing of projects, as well as at the stages of monitoring and tracking the savings.

For the domestic industry social and economic benefits are generated associated with the processes of assembling the lamps, considering a production model that imports the LED elements which are then assembled in the country to meet the demand created by the program. Whereas investment in LEDs represents 30% of the value of the lamp, 70% of the total planned investment (US$17.5 million) would go to the national industry for the production of components for assembly and installation of the lamps.

Similarly, jobs are created in the local industry for recycling processes and disposal of materials that are generated when the lamps are changed. Part of the waste would be considered hazardous according to local law and should be treated by certified companies in facilities for proper disposal.

Performance improvement in street lighting systems has shown positive effects on the security of cities where they have been implemented. In the case of municipalities in Colombia, in addition to the savings generated, they are particularly interested in improving safety levels in areas with high rates of robbery and homicide. Although research on the effect of improved street lighting on crime rates is not complete, analysis from eight different studies showed that improving lighting in streets, either by increasing the number or the intensity of lights, reduced crime rates by an average of 7%[10].

According to some studies, street lighting does more than prevent crime. Improving lighting makes the community feel safer. Vehicles can operate more safely at night, accidents are reduced and traffic flow improved[11]. Also, businesses that operate at night are stimulated and night time pedestrian traffic increases, all of which makes the project zone more active and enjoyable[12].

6. *Risks.* Indicate risks, including climate change and potential social and environmental future risks that might prevent achievement of the project objectives, and if possible, propose measures that address these risks:

Risk	Level of Risk	Mitigation Actions
Inefficient organization and coordination of stakeholders, such as government agencies, energy services providers, LED producers, research institutions, experts and end users	Medium	The project development team will assign support with specific technical capacity and coordination of activities during the development of the project.
Ineffective coordination in research content and execution periods	Medium	Clear understanding of the requirements (timing and budget) for each of the planned activities will be ensured by the project team.
Low level of participation from energy services providers	Low	Ensure involvement of energy services providers starting from the project design stage, dissemination of the latest information through correct channels and identification of their needs and demand through continuous dialogue
Low level of government support in	Low	Incorporation of the necessary interventions for the formulation of EE

[10] Farrington, DP, and B. Welsh (2002) Effects of improved street lighting on crime. a systematic review London, United Kingdom: Home Office Research, 39

[11] Crilly, M., (1998) Contributory factors to traffic accident deaths identified at coroner's inquest. European Journal of Public Health. 20: 139-143.

[12] City of Oakland. (1999) City of Oakland Street Lighting Warrants. Oakland , California

the effective enforcement or proposed policies and regulations		street lighting initiative, as well as improving the institutional arrangements for the implementation of the proposed EE standards/protocols.
Low quality results if the technical work is not properly monitored.	Medium	IDB will provide peer review of the products developed, and part of the project resources would be allocated to enhance the capacity of FINDETER to develop the project and consultations with EE services providers and Municipalities before the final outputs of the components to ensure that they reflect the needs of stakeholders and are of high quality.

7. Cost Effectiveness. Explain how cost-effectiveness is reflected in the project design:
The activities financed with GEF resources will follow the procurement policies and procedures of the Inter-American Development Bank. The procurement policies reflect the principles of economy, efficiency and integrity in procurement. These policies reflect the interest of the IDB and its member countries to provide transparency, competition and equality of opportunities.

The project involves an investment of US$25million[13] to achieve a reduction of 100,804 tons of CO_2 in 10 years of operation, with which the specific investment is US$ 354 per ton reduced. According to the financial analysis of the project, the IRR of investments in 10 years ranges between 9.6% and 33.8% depending on the cost of investment and maintenance costs of the lamps used. These returns are achieved based on financing projects with rates of 5.13% per year.

Additionally, the project would allow energy savings for municipalities in Colombia of 30,804 MWh per year that currently average cost close to US$ 3,5 MUS$, so that the simple return on investment in high-efficiency systems for street lighting could be achieved in less than five years' time.. Within 10 years, the project would have generated savings of US$ 658 per ton of CO_2 reduced. The cost effectiveness of the GEF financing would be US$ 21.7per Ton of CO2.

8. Coordination. Outline the coordination with other relevant GEF-financed projects and other initiatives

Colombia developed a Low Carbon Development Strategy (LCDS) with the support of various international development institutions that analyzes the current greenhouse gas emissions baseline at the national and sector levels. This analysis will provide the basis for proposing concrete actions for growth under a low-carbon development path. The project will benefit from close coordination with the LCDS recommendations from the analysis for energy sector. All components of the project will be articulated with the LCDS, in order to coordinate aspects such as GHG baseline calculations, methodologies and consultations

9. Institutional Arrangement. Describe the institutional arrangement for project implementation:

The project will executed by FINDETER, with the fiduciary and operational capacities necessary for the successful execution of the program, as it is governed by the Financial System act (Law 57, 1989) and is subject to the supervision and monitoring by the Superintendence of Finance. In addition, the government has chosen FINDETER as one of the entities that will support its GHG emissions reduction efforts. For the purposes of this program, FINDETER will be responsible for: (i) executing the appropriate use of the resources obtained through the proposed technical cooperation (ii) providing in due time and form the necessary human, technological and budgetary resources required; and (iii) delivering to the Bank the requited documentation to meet disbursements and other performance requirements for execution. The project implementation will be based on the results matrix mentioned above and the products and indicators contained therein.
FINDETER will submit to the IDB the following reports: (i) progress reports every six months, within sixty (60) days from the end of the six months; and (ii) a final report within six months from the end of last project activity executed. The contents of the reports shall be jointly agreed between the Bank and FINDETER. The executor will also provide the Bank's financial statements of the project, within 90 days after the date stipulated for its last disbursement, which will be audited by an independent auditor firm selected.

[13] Equivalent to 70% from the finance of the project and the other 30% comes from private sector.

10. Knowledge Management. Outline the knowledge management approach for the project, including, if any, plans for the project to learn from other relevant projects and initiatives, to assess and document in a user-friendly form, and share these experiences and expertise with relevant stakeholders.

A project Manager will lead and coordinate the knowledge management of the project to achieve an accurate and adequate report of results, achievements, learned lessons and knowledge sharing between actors and stakeholders. Dissemination and training will rely on FINDETER's dissemination structures and networks as well as on sectoral associations. Specialized technical backstopping will be sought as required.
(i) Transparency: All the information relating to the Project will be made available publicly through a dedicated web page and in accordance with IDB policies on transparency and access to information. In addition information about the Program will also be made available in IDB dedicated web pages to national development banks (NDB), i.e. Klave Finanzas Verdes[14] and a community of practice for Financial Institutions on green finance.[15] All web pages mentioned above are public and free of access.
(ii) Promotion of exchange and learning with relevant actors: As mentioned above, in addition to promoting the Project activities through an IDB network of client NDBs and relevant actors, the Project plans to:

- Work closely with FINDETER to scale and improve local capillarity and relations with government, LFIs and firms to develop financing strategies and promote their execution.
- Reach out to national associations of FIs, target sectors/firms, chambers of commerce and technology providers/ESCO associations to engage with the local private sector and promote its participation in the design and implementation of financing strategies for EE.
- Work closely with regional and international networks of FIs (ALIDE, FELABAN and UNEP FI) in promoting lessons learned and potential replication of financing strategies for street lighting with other NDBs and FIs in the LAC region.

11. Consistency with National Priorities. Is the project consistent with national strategies and plans or reports and assessments under relevant conventions? (yes ☒ /no☐). If yes, which ones and how: NAPAs, NAPs, NBSAPs, ASGM NAPs, MIAs, NCs, TNAs, NCSA, NIPs, PRSPs, NPFE, BURs, etc.

Colombia's second national communication to the United Nations Framework Convention on Climate Change[16] lists the Energy Sector as one of the priority sectors in Colombia. This sector has several plans and programs to reduce GHGs, namely related to the rational use of energy, energy efficiency, use of renewable sources, and distributed generation in isolated areas, etc. The power system in Colombia is dominated by hydropower generation. In 2011, hydropower contributed 64% of installed capacity and 78% of total power generation. The GoC is committed to reducing the energy intensity of its economy and to establishing incentives and alternatives to reduce the carbon-footprint in the country. Furthermore, the country has developed the National Energy Plan for 2006-2025 that highlights the need to work on promoting EE in the country as a key element in reducing CO_2 emissions. It also establishes guidelines for energy policy with a long-term vision to ensure energy supplies, including a program for Rational and Efficient Use of Energy and Other Forms of Non-conventional Energy (PROURE). More recently, through Resolution 180919 of June 01, 2010, the Ministry of Mines and Energy adopted an Indicative Plan of Action 2010-15 to implement the PROURE program, as well as issued national act 1715 on May 14th, 2014 regarding the promotion of Renewable Energy and Energy Efficiency.
The GoC, led by the Ministry of Environment and Sustainable Development (MESD), has also launched a public-private-supported Low-Carbon Development National Strategy (LCDNS), framed under the national policy document CONPES 3700 ("Institutional strategy for the coordination of policies and actions on climate change in Colombia", 2011) and which seeks to identify the country's Green House Gases (GHG) mitigation potential and the appropriate GHG mitigation measures and projects that should be undertaken by productive sectors without compromising the long-term growth prospects of the economy. The challenge of the LCDNS is to find, through the implementation of the productive sectors' competitiveness plans, alternatives that would avoid rapid growth of GHG emissions, taking advantage of the support of international climate finance, public and private sector finance and carbon markets.

14 http://kp.iadb.org/finanzasverdes/es/Paginas/Home.aspx

15 http://finanzascarbono.org/comunidad/pg/groups/17/instituciones-financieras

16 http://unfccc.int/national_reports/non-annex_i_natcom/items/2979.php

To enhance the economy's growth prospects over the medium to long-term, the government of Colombia (GoC), has adopted, through its National Policy for Competitiveness and Productivity (NPCP), a series of measures that seek to enhance the competitiveness of sectors with a high potential for growth, such as tourism, energy and agriculture, in order to attract new investments, compete in global markets, generate formal employment and combat poverty and inequality. The NPCP also contemplates the strategic articulation of environmental issues as critical factors to enhance the country's competitiveness.

12. M & E Plan. Describe the budgeted monitoring and evaluation plan.

The project will have a monitoring and evaluation (M&E) plan as part of its overall implementation process, based on the structure, outputs and indicators proposed and according to GEF procedures (see Annex I). It will include team members of IDB and FINDETER. The evaluation of the project will be based on performance in execution, delivery of outputs and project impact regarding reductions in GHG emissions.

The M&E plan procedure will consist of detailed progress reports, and a final project report. The M&E plan will also have continuous monitoring with specific milestones every six months. Reporting on project progress and indicator achievement will also be developed on a semester basis. The final reports will be submitted to the GEF M&E Unit as well as other stakeholders involved in the implementation of this project.

The project manager within IDB will be responsible for the continuous monitoring of project activities, the implementation of the different components with their respective studies and project progress.

Type of M/E activity	Category	GEF Budget	Responsible	Time Frame
Measurement GEF tracking tool indicators	Project management	20,000	Project manager	Continuous
Project implementation review			Project manager and FINDETER	Every six months
Monitoring project indicators			Project manager	End of project
Semester monitoring reports	Project management	8,000	Project manager and FINDETER	Every six months
Independent final evaluation report	Terminal Evaluation Review conducted by IFD/CMF	15,000	External reviewer	2 months prior to project finalization

PART III: APPROVAL/ENDORSEMENT BY GEF OPERATIONAL FOCAL POINT(S) AND GEF AGENCY(IES)

A. Record of Endorsement[17] of GEF Operational Focal Point(s) on Behalf of the Government(s): (Please attach the *Operational Focal Point endorsement letter(s)* with this template. For SGP, use this SGP OFP endorsement letter).

NAME	POSITION	MINISTRY	DATE *(MM/dd/yyyy)*
Gaia Hernandez Palacios;	Head of International Affairs Office	MINISTRY OF THE ENVIRONMENT AND SUSTAINABLE DEVELOPMENT OF COLOMBIA	

B. GEF Agency(ies) Certification

This request has been prepared in accordance with GEF policies[18] and procedures and meets the GEF criteria for a medium-sized project approval under GEF-6.					
Agency Coordinator, Agency name	**Signature**	**DATE** *(MM/dd/yyyy)*	**Project Contact Person**	**Telephone**	**Email Address**
Michael Collins, IDB-GEF Executive Coordinator		11/24/2015	Jose Juan Gomes, Capital Markets and Financial Institutions (IFD/CMF)	+1202 6233634	joseg@iadb.org

[17] For regional and/or global projects in which participating countries are identified, OFP endorsement letters from these countries are required even though there may not be a STAR allocation associated with the project.
[18] GEF policies encompass all managed trust funds, namely: GEFTF, LDCF, and SCCF

ANNEX I: PROJECT RESULTS FRAMEWORK

Indicative Results Matrix

	Unit	Baseline		Year 1 - 5		Expected Completion Date*	Data Source
		Value	Year	Planned	Actual		
Component 1: Technical documents on Street lighting	#	0	2015	2			Beneficiary information and IDB Systems
Component 1: Legal advising of projects to make them viable and sustainable. Create a "model contract" for street lighting projects	#	0	2015	2			Beneficiary information and IDB Systems
Component 1: Development of a document in EE criteria for selection and contracting LED technology for street lighting.	#	0	2015	1			Beneficiary information and IDB Systems
Component 2: Development of innovative financial mechanisms through a credit line.	#	0	2015	1			Beneficiary information and IDB Systems
Component 2: Implementation of projects with the financial and non-financial mechanisms.	#	0	2015	2			Beneficiary information and IDB Systems
Component 3: Validation templates and evaluation criteria for suppliers	#	0	2015	1			Beneficiary information and IDB Systems
Component 3: Development of the monitoring and evaluation mechanisms for Street lighting projects	#	0	2015	1			Beneficiary information and IDB Systems
Component 4: Development of Communication strategy and action plan.	#	0	2015	1			Beneficiary information and IDB Systems
Component 4: EE for Street lighting workshop	#	0	2015	1			Survey
Component 4: Website platform to communicate the performance and results	#	0	2015	1			Beneficiary information and IDB Systems