

DOCUMENT OF THE INTER-AMERICAN DEVELOPMENT BANK

**COLOMBIA**

**CTF ENERGY EFFICIENCY FINANCING PROGRAM FOR THE SERVICES  
SECTOR**

**(CO-L1124)**

**AND**

**NON-REIMBURSABLE TECHNICAL COOPERATION**

**MITIGATION OF GHG EMISSIONS THROUGH ENERGY EFFICIENT  
INVESTMENTS IN HOTELS AND CLINICS/HOSPITALS SUB-SECTORS**

**(CO-T1332)**

**LOAN PROPOSAL**

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ELECTRONIC LINKS	
<b>REQUIRED</b>	
1.	Monitoring & Evaluation Arrangements <a href="http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=37449473">http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=37449473</a>
2.	Environmental and Social Management Report (ESMR) <a href="http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=37447171">http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=37447171</a>
3.	Safeguard Policy Filter Report (SPF) <a href="http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=36822967">http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=36822967</a>
<b>OPTIONAL</b>	
1.	Characteristics of the Program <a href="http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=37450899">http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=37450899</a>
2.	Clean Technology Fund Investment Plan for Colombia, Climate Investment Funds, April 12, 2010. <a href="http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=37438722">http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=37438722</a>
3.	<i>Estudio de Mercado sobre el Potencial de Eficiencia Energética y Energías Renovables para Hoteles, E. Botero y D. Magallon, 2012.</i> <a href="http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=37478958">http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=37478958</a>
4.	<i>Estudio de Mercado sobre el Potencial de Eficiencia Energética y Energías Renovables para Hospitales y Clínicas Privados, E. Botero y D. Magallon, 2012.</i> <a href="http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=37439015">http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=37439015</a>
5.	<i>Estudio. Asistencia técnica para el desarrollo de una línea de financiamiento para la promoción de actividades de mitigación del cambio climático y eficiencia energética por Bancóldex. F. Charry, 2012.</i> <a href="http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=37412095">http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=37412095</a>
6.	<i>Desarrollo de una estrategia para Bancóldex para financiar proyectos de mitigación de gases de efecto invernadero, Poch &amp; Base, 2011.</i> <a href="http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=36712671">http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=36712671</a>
7.	Cost-Benefit Analysis <a href="http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=37449551">http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=37449551</a>

## ELECTRONIC LINKS

8. Colombia's Financial Sector Assessment  
<http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=37447153>
9. Financial Assessment of Bancóldex  
<http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=37447612>
10. Revised Clean Technology Fund Investment Plan for Colombia  
<http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=37813012>

## ABBREVIATIONS

CIFs	Climate Investment Funds
CCLIP	Conditional Credit Line for Investment Projects
CTF	Clean Technology Fund
CONPES	Colombia Policy Document
COP	Colombian Pesos
COTELCO	National Association of Colombian Hotels
DTF	Fixed Term Deposits, i.e. <i>Depósitos Termino Fijo</i>
EA	Executing Agency
EE	Energy Efficiency
ESMR	Environmental and Social Management Report
ESS	Environmental and Social Strategy
GHG	Greenhouse Gases
GDP	Gross Domestic Product
GCI-9	Ninth General Capital Increase
IDB	Inter-American Development Bank
IP	Investment Plan
IFC	International Finance Corporation
LCDNS	Low Carbon Development National Strategy
LFIs	Local Financial Institutions
MCIT	Ministry of Commerce, Industry and Tourism
MSMEs	Micro, small and medium enterprises
NPCP	National Policy for Competitiveness and Productivity
NDP	National Development Plan
NPPT	National Plan for Productive Transformation
POD	Proposal for Operation Development
PROURE	Program of Rational and Efficient Use of Energy and Other Forms of Non-conventional Energy
SSF	Safeguard and Screening Form for Screening and Classification of Projects
UNFCCC	United Nations Framework Convention on Climate Change
UPME	Colombian Government's Energy and Mining Planning Unit
USD	Dollars of the United States of America

## PROJECT SUMMARY

### COLOMBIA

#### CTF ENERGY EFFICIENCY FINANCING PROGRAM FOR THE SERVICES SECTOR

#### (CO-L1124)

#### NON-REIMBURSABLE TECHNICAL COOPERATION MITIGATION OF GHG EMISSIONS THROUGH

#### ENERGY EFFICIENT INVESTMENTS IN HOTELS AND CLINICS/HOSPITALS SUB-SECTORS

#### (CO-T1332)

Financial Terms and Conditions			
<b>Borrower:</b> Bancóldex		<b>Maturity:</b>	20 years
<b>Guarantor:</b> Republic of Colombia		<b>Amortization Period:</b>	20 years
<b>Executing Agency:</b> Bancóldex		<b>Grace Period:</b>	10.5 years
<b>Source:</b> Clean Technology Fund (CTF)*	<b>Amount (US\$)</b>	<b>Disbursement Period:</b>	48 months
<b>Loan CO-L1124</b>	10 million	<b>Interest Rate:</b>	0.75% Fixed
		<b>Administration Fee:</b>	0.45%, one time
<b>Total</b>	<b>10 million</b>	<b>Currency of Approval:</b>	US\$ chargeable to CTF
<b>Non-reimbursable Technical Cooperation (TC) CO-T1332</b>	750,000		
Project at a Glance			
<p><b>Project Objective/Description:</b> The program’s goal is to support Colombia’s efforts to enhance the competitiveness of the hotel and clinic/hospital sub-sectors, while reducing GHG emissions, through the piloting of an innovative model to finance energy efficiency (EE) projects. The proposed loan’s objective will be to increase EE investments in hotels and clinics/hospitals. To achieve that objective, the complementary TC (CO-T1332) (Annex IV), which will support market development efforts and program execution, will help to build up the awareness and capacities of Bancóldex, LFIs and other relevant market actors on the structuring, financing, monitoring and evaluation of competitiveness-enhancing, EE projects (see ¶1.29).</p> <p>In addition, the proposed loan will be complemented with resources from loan (CO-L1132;2949/OC-CO) (see footnote 46).</p> <p>This program is part of a multi-pronged approach agreed by the Government of Colombia and the CTF to help the country achieve over the long term a low carbon growth path.</p> <p><b>Related operations:</b> This project is closely related to a TC that supports Bancóldex in the detailed design of the financing line and the proposed innovative financing model (CO-T1328).</p> <p><b>Special contractual clauses:</b> As a condition prior to the first disbursement, the Executing Agency will provide evidence, to the Bank’s satisfaction, of: (i) the formal designation of a Program Coordinator; (ii) the entry into effect of the Operational Regulations agreed with the Bank; and (iii) a plan of investment for the first 180 days of the program (¶3.3).</p> <p><b>Exceptions to Bank policies:</b> The Republic of Colombia will only guarantee all financial obligations; therefore it is proposed that a partial waiver to the Bank’s policy on “Guarantees required from Borrower” (OP-303) be approved by the Board of Executive Directors (¶3.1).</p>			
<p><b>The Project qualifies for:</b>    SEQ <input type="checkbox"/>    PTI <input type="checkbox"/>    Sector <input type="checkbox"/>    Geographic <input type="checkbox"/>    Headcount <input type="checkbox"/></p>			

(\*)According to the “Proposal for the establishment of the Clean Technology Fund (CTF) in the Inter-American Development Bank”, (GN-2571), the financing of Energy Efficiency (EE) individual investment projects to be funded with program resources will be complemented with the financing of similar investment projects to be funded with resources (for up to US\$10 million) of an existing CCLIP (CO-X1007). The third loan operation under the CCLIP (CO-L1132; 2949/OC-CO, US\$200 million), recently approved, has as its objective the strengthening of the competitiveness of eligible firms through the financing of investment projects for: (i) innovation and technological development; and (ii) mitigation and control of environmental impacts.

## I. DESCRIPTION AND RESULTS MONITORING

### A. Background

- 1.1 The current (consumption-driven) economic model coupled with a rising population has brought about increasing pressure on natural resources and undesirable environmental consequences of human activity, such as pollution. Available data suggests that there may be a positive relationship between a country's competitiveness<sup>1</sup> and the degradation of its environment. Figure 1 illustrates such relationship for 61 countries, based on 2009 data. On the basis of this type of evidence, the protection of the environment and economic growth are often seen as competing aims. Industries, for instance, often claim that tightened environmental regulations or ambitious environmental commitments hamper their growth, undermining their competitiveness.
- 1.2 However, as Porter and van der Linde<sup>2</sup> argue, the environment-competitiveness tradeoff has been framed incorrectly. This struggle between ecology and the economy grows out of a static view in which technology, products, processes and customer needs are all fixed. Under this view, once firms have made their cost minimizing choices, pursuing environmental objectives inevitable raises costs and may reduce their market shares. In a more dynamic view, innovation-based solutions could promote both competitiveness and environmentalism.
- 1.3 In Colombia, like in many other countries, there seems to be a positive relation between competitiveness and per capita Carbon Dioxide (CO<sub>2</sub>) emissions. Figure 2 illustrates the evolution of both variables, suggesting that recent increases in competitiveness have been accompanied with higher per capita CO<sub>2</sub> emissions.

Figure 1

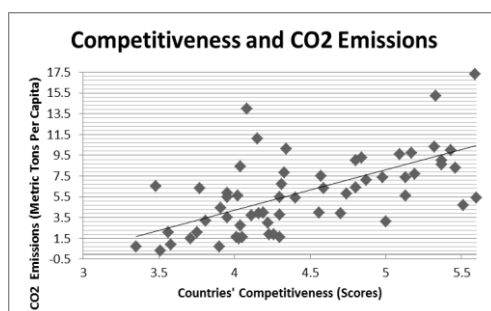
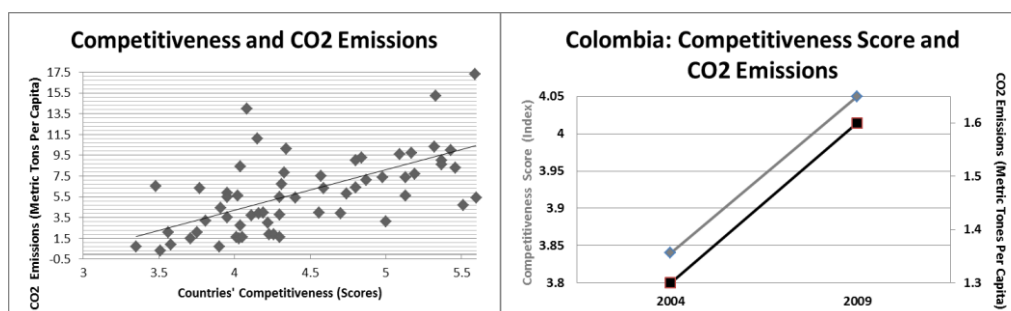


Figure 2



Source: Global Competitiveness Index, 2009-2010 and World Bank CO<sub>2</sub> Emissions Table

<sup>1</sup> Competitiveness at the country level arises from the set of institutions, policies, and factors that determine an economy as one that is likely to maintain growth due to the high rates of return obtained from investments. At the industry level, it arises from superior productivity; either in terms of lower costs than rivals or the ability to offer products with superior value that justifies a premium price. See Op. Cit 2.

<sup>2</sup> Michael E Porter and Claas van der Linde (1995) *Towards a New Conception of the Environment-Competitiveness Relationship*. *Journal of Economic Perspectives*, Volume 9, Number 4.

- 1.4 **Government policies to promote sustainable competitiveness and growth.** To enhance the economy's growth prospects over the medium to long-term, the government has adopted a series of measures, through its National Policy for Competitiveness and Productivity (NPCP<sup>3</sup>), which 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.
- 1.5 The government has also launched a public-private-supported Low-Carbon Development National Strategy (LCDNS),<sup>4</sup> that 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 to avoid a rapid growth of GHG emissions taking advantage of the support of international climate finance, public and private sector finance and carbon markets.
- 1.6 **Colombian GHG emission reduction and EE.** The electricity sector accounts for 15% of the country's energy mix.<sup>5</sup> Although the sector is relatively clean in terms of GHG emissions,<sup>6</sup> two important dynamic considerations explain the government's increasing interest in promoting end-use EE and/or low-carbon Electricity Generation (EG) investments. First, the country is expected to continue to grow robustly in the coming years due to the dynamism of its oil and mining sectors,<sup>7</sup> which may demand new generation capacity that could very likely come from fossil-fuel power sources, particularly coal.<sup>8</sup> Second, in the context of climate change, the supply of hydropower could become more vulnerable to water shortages due to more frequent and intense El Niño events, exacerbating the need for new power plants with higher carbon intensities. In the absence of sustained efforts to promote end-use EE investments and/or low-carbon EG that can defer or substitute new investments in coal-fired electricity generation, the country's

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<sup>3</sup> See Colombia Policy Document ([CONPES 3527](#)) of 2008 on Competitiveness and Productivity.

<sup>4</sup> See Colombia Policy Document ([CONPES 3700](#)) of 2011 on Institutional Coordination Strategy for Policy and Actions in Climate Change.

<sup>5</sup> Other sources of energy in the country's mix include: Oil and oil products, 45% of final energy consumption (mostly for the transport sector); natural gas 19% (mostly for the industrial sector); bio-energy 16% (mostly for the residential, industrial, and transport sectors); and coal and coke the remaining 5%. (UPME, [Energy balances](#)).

<sup>6</sup> During the last decade an average of 78% of the electricity generated in the country was based on hydropower. See ([XM – Expertos en Mercados](#)).

<sup>7</sup> See document *Colombia. Evaluación Macroeconómica Independiente*. CS-4014.

<sup>8</sup> According to the *Unidad de Planeación Minero Energética* (UPME), the average annual growth rate of electricity demand is expected to increase from 2.9% in 2000-2009 to 3.7% in 2009-2020. ([Generation and Transmission Expansion Plan, 2010-2024, UPME](#)). To satisfy this demand increase, UPME projects that fossil-fuel power sources like coal will need to be tapped, resulting in new GHG emissions. Indeed, coal production in 2010 stood at 74.35 million tons and is expected to reach 144 million tons in 2020, supporting the expansion of the country's coal-fired electricity generation capacity. See: [World Coal Institute, "Coal Statistics"](#) accessed February 2010.



future electricity supply could be characterized by a higher carbon footprint than in the recent past.

- 1.7 Facing these energy challenges, the government has demonstrated in recent years its commitment at reducing the energy intensity of its economy through a variety of policy and regulatory measures that seek to create an enabling environment for EE. These include: (i) creating a legal framework for EE and standard setting mechanisms; (ii) establishing a national EE commission; (iii) directing the energy regulator to set efficiency standards for appliances and systems; (iv) carrying out extensive studies on carbon abatement and a national plan for EE; (v) encouraging distribution companies to promote EE investments; and (vi) granting tax incentives for such investments. Furthermore, the National Energy Plan 2006-25, establishes guidelines for energy policy with a long-term vision to ensure energy supplies, including a Program for the Rational and Efficient Use of Energy and Other Forms of Non-conventional Energy (PROURE). More recently, though 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.
- 1.8 The CTF<sup>9</sup> approved in 2010 an Investment Plan (IP) for Colombia,<sup>10</sup> which outlines the strategy, sectors, and objectives to be implemented by the Bank, the World Bank and the International Finance Corporation (IFC) in leveraging additional resources to support GHG mitigation measures. That plan was revised in April 2013.<sup>11</sup> Given the government's interest in promoting end-use EE measures, the revised IP for Colombia includes US\$39 million of concessional CTF resources for EE, of which US\$10 million are to be intermediated by Bancóldex through the proposed program. Overall, it is expected that the CTF's IP's EE program would save over 35.8 Mt CO<sub>2</sub>e over a 20 year period, with 39 million in CTF resources leveraging US\$108 million in additional public and private sector investments in this area.
- 1.9 **Increased energy efficiency as a driver for growth, competitiveness and inclusive, sustainable development in the hotel and clinics/hospitals sub-sectors.** While the CTF's IP for Colombia has identified the existence of significant opportunities for scaling-up implementation of EE technologies in electricity and thermal end-uses across all sectors of the economy,<sup>12</sup> the Government of Colombia selected to concentrate the proposed program on hotels and clinics/hospitals for a number of reasons: (i) their economic and social importance both at the national and regional levels, as reflected in the 2010-2014 National Development Plan (NDP) and the National Plan for Productive Transformation (NPPT); (ii) GHG emissions reductions in these

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<sup>9</sup> The [CTF](#) is a fund under the Climate Investment Funds (CIFs) governed by a Trust-Fund Committee (TFC), with representatives of donors and recipient countries. CTF financing is channeled through five MDBs, including the IDB, which was designated Implementing Entity on June 8, 2010.

<sup>10</sup> [Clean Technology Fund Investment Plan for Colombia](#), Climate Investment Funds, April 12, 2010.

<sup>11</sup> [Revised Clean Technology Fund Investment Plan for Colombia](#), Climate Investment Funds, April 2013.

<sup>12</sup> A recent study commissioned by KfW shows that the main EE technologies are financially viable in Colombia, but financial barriers, mainly due to risk perception from Local Financial Institutions (LFIs) and potential clients, prevent their adoption. (*"Promoción de Medidas de Eficiencia Energética y Energías Renovables en Colombia"*, Castalia, 2011)

sub-sectors, though relatively smaller than in other sectors, can be achieved more cost-effectively because they confront higher energy prices than industry,<sup>13</sup> for instance, and numerous firms are operating with energy-inefficient technologies; (iii) their relatively easier implementation potential, as it would involve EE measures for buildings<sup>14</sup> based on technologies which are well known and readily available in the market; (iv) given the program's limited amount of resources, a more powerful demonstration and transformational effect could be achieved in the market if they are geared to sub-sectors where the individual cost of introducing EE measures is relatively low; (v) the proposed financing model, i.e. supporting both the supply of and the demand for financing for EE projects, could have powerful demonstration and replication effects not only in those sub-sectors, but also in the rest of the services sector;<sup>15</sup> and (vi) based on a recent study<sup>16</sup> and consultations with Bancóldex and LFIs, it was determined that those sub-sectors are well organized at the national and regional levels through associations, which facilitates the dissemination of knowledge and the implementation of strategies to stimulate the demand for EE financing and the scaling up of the program.

1.10 **The hotel sub-sector in Colombia.**<sup>17</sup> The sector has some 6,000 firms,<sup>18</sup> most of which are small and medium size firms operating with obsolete, energy-inefficient technologies.<sup>19</sup> Furthermore, the sector employs around 128,000 people, of which 83,200 (65%) are women.<sup>20</sup> Given the strong dynamism of the Colombian economy in recent years, the hotel sub-sector has

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<sup>13</sup> Most hotels and clinics/hospitals are considered to be regulated clients in Colombia's electricity and natural gas markets ([www.creg.gov.co](http://www.creg.gov.co)), although there are a few large ones which are unregulated. Both regulated and unregulated hotels and clinics/hospitals pay equal or higher prices per unit of energy (electricity or gas) than firms in the industrial sector. This is particularly true in the northern coast of the country, where most tourism hotels are concentrated. In this area, a 200-room hotel pays between US\$500,000 and US\$1 million per year for its electricity and natural gas consumption. ([Estudio de Mercado sobre el Potencial de Eficiencia Energética y Energías Renovables para Hoteles](#), E. Botero y D. Magallon, 2012).

<sup>14</sup> Supporting the demand for financing of EE projects in sectors where the required technological change entails the replacement of easily replicable technologies (air conditioners, boilers, solar water heaters, cogeneration units, and lighting) is much easier than in other productive settings that depend on technological solutions that have to be tailor-made to specific plant configurations ([Estudio de Mercado sobre el Potencial de Eficiencia Energética y Energías Renovables para Hoteles](#), E. Botero y D. Magallon, 2012).

<sup>15</sup> According to the [World Economic Forum 2013 Competitiveness Report](#), the value added of the services sector as percentage of GDP is 61%, compared to 7% in agriculture, 13.5% in manufacturing and 18.5 in non-manufacturing industry.

<sup>16</sup> See pages 91 and 154 of "[Development of a Strategy for BANCOLDEX to Finance GHG Mitigation Projects](#)", Poch-Base, October 2011.

<sup>17</sup> For an analysis on the performance and outlook of the sector see Jorge Humberto Botero's "Estudio de Prospectiva para la Industria de la Hotelería", Fedesarrollo, September 2010.

<sup>18</sup> Around 1,600 of them are members of the National Association of Hotels ([Cotelco: Asociación Hotelera y Turística de Colombia](#)).

<sup>19</sup> According to a recent survey on representative firms, the average age of their energy-based equipment was between 10-15 years. See: [Estudio de Mercado sobre el Potencial de Eficiencia Energética y Energías Renovables para Hoteles](#), E. Botero y D. Magallon, 2012.

<sup>20</sup> See [Redatam+SP - CEPAL/CELADE](#).

been growing at a very rapid pace.<sup>21</sup> This strong growth in the sector is likely to continue going forward amid the country's favorable economic prospects.<sup>22</sup> This trend is expected to increase the sub-sector's energy use and GHG emissions unless new EE standards are established for new facilities and more EE technologies are adopted by most of the old ones.

- 1.11 An important development in the sector is the arrival of large foreign hotel chains into the domestic market.<sup>23</sup> Since the facilities of these new entrants are incorporating modern EE technologies, they are likely to exert powerful competitive pressures on smaller and older hotels which have larger operational costs per unit of output, thus running the risk to be gradually displaced from the market, with the resulting adverse impact on employment and income generation, particularly for women.<sup>24</sup> It is estimated that the energy savings and GHG emissions reductions potential in this sector are 468 GWh/year and 90,501 T CO<sub>2</sub>e, respectively,<sup>25</sup> equivalent to a 19% average reduction in energy costs.<sup>26</sup>
- 1.12 **The clinics/hospitals sub-sector.** According to available information, the sector has some 9,605 health institutions authorized by the Ministry of Health,<sup>27</sup> which like in the case of hotels, have been operating with outdated, energy-inefficient technologies.<sup>28</sup> Total employment in the sector amounted to 92,256 people, of which 65,561 were women (or 71% of that total).<sup>29</sup>
- 1.13 This sub-sector has also been growing at a very rapid pace in recent years. Between 2000 and 2009, it grew by 38% in real terms. Besides increasing government spending in the sector, an important factor responsible for this growth, from the private sector side of the market, is an increasing expansion in the exports of health services.<sup>30</sup>

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<sup>21</sup> In 2000-09, the GDP of the hotel and restaurant sub-sectors grew 30% in real terms. See *Producto Interno Bruto a Precios Constantes Grandes Ramas de la Actividad Económica – Banco de la República*.

<sup>22</sup> See Proexport, [Colombia, 10 razones para invertir en infraestructura hotelera en Colombia](#) and Jorge Botero's "Estudio de Prospectiva para la Industria de la Hotelería", Fedesarrollo, September 2010.

<sup>23</sup> See: Proexport Colombia, [Informe sobre Turismo](#), December 2011.

<sup>24</sup> According to [ECLAC statistics](#), generated with data from the 2010 Household Survey, the incidence of poverty in Colombia is greater for women than for men.

<sup>25</sup> If the technology improvements proposed by this program (¶2.4a) were adopted in 90 hotels, the potential of energy savings and associated GHG emissions would be approximately 55.8 GWh/year and 10,774 TCO<sub>2</sub>e, respectively. ([Estudio de Mercado sobre el Potencial de Eficiencia Energética y Energías Renovables para Hoteles](#), E. Botero y D. Magallon, 2012)

<sup>26</sup> Energy costs represent around 25% of operational costs of hotels in Colombia. ([Estudio de Mercado sobre el Potencial de Eficiencia Energética y Energías Renovables para Hoteles](#), E. Botero y D. Magallon, 2012)

<sup>27</sup> See: Statistics provided by DANE using the [MSPS \(Ministerio de Salud y la Protección Social\) database](#) in November 2012.

<sup>28</sup> According to a recent survey on representative firms, the average age of their energy-based equipment was between 10-15 years. See: [Estudio de Mercado sobre el Potencial de Eficiencia Energética y Energías Renovables para Hoteles](#), E. Botero y D. Magallon, 2012.

<sup>29</sup> See: Statistics provided by DANE using the "[Encuesta Anual de Servicios-EAS](#)", 2009.

<sup>30</sup> According to a survey conducted by Proexport ( "[Comprender las oportunidades de la industria de la salud en Colombia](#)" ) to leading exporters of medical services, their average occupancy rates are above 80%, demonstrating the strong foreign demand for their services.

- 1.14 Given these growth trends, and the government's efforts to attract new investments into the health tourism sector,<sup>31</sup> it is likely that the sub-sector will expand even further in the future, increasing its energy demand and GHG emissions unless new EE standards are established for new facilities and more EE technologies are adopted by the old ones.
- 1.15 As new, modern facilities enter into the market, they will exert strong competitive pressures on older ones. One effective strategy to counteract these pressures, and improve the quantity and quality of services, while reducing GHG emissions, is to improve their energy efficiency, and hence reduce their operational costs. It is estimated that the energy savings and GHG emission reductions potential in this sector could reach 75 GWh/year and 26,217 TCO<sub>2e</sub>, respectively,<sup>32</sup> equivalent to a 9.6% average cut in energy costs.<sup>33</sup>
- 1.16 **The challenge of financing EE investment projects in Colombia.** As highlighted in the CTF<sup>7</sup> IP for Colombia, there is a dearth of domestic EE financing availability in Colombia due to a number of interrelated financial and knowledge barriers. LFIs lack expertise and capacity on how to market, analyze and structure EE deals, and are uncertain about their returns and risks.
- 1.17 In addition, the supply of credit to the private sector is very low (36% of GDP in 2011, lower than that of comparable economies in the region) and most of that credit is of relatively short maturities<sup>34</sup> due to the fact that LFI's deposits are concentrated in very short-term instruments. Indeed, by November 2012, 71.2% of their deposits were of less than one year, with 63.5% of less than 180 days.<sup>35</sup> Credit access does not affect all firms equally. Micro-, small- and medium-sized enterprises (MSMEs) have traditionally had limited access to financing,<sup>36</sup> especially medium- and long-term financing.
- 1.18 On the demand side, end-users lack knowledge of the economic benefits of energy efficient equipment and perceive that EE investments have a high opportunity cost. There is also a lack of technical service providers that could support the adoption and financing of EE measures. See Op. Cit. 11 and 15.

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<sup>31</sup> The Colombian government expects that Colombia's share in the world market of health tourism will increase from its current 5% to between 20-30% by 2032 (Proexport, "[Comprender las oportunidades de la industria de la salud en Colombia](#)").

<sup>32</sup> If the technology improvements proposed by this program (see ¶2.4a) were adopted in about 34 clinics/hospitals, the potential of energy savings and associated GHG emissions reductions would be 12.4 GWh/year and 4,642 TCO<sub>2e</sub>/year. ([Estudio de Mercado sobre el Potencial de Eficiencia Energética y Energías Renovables para Hospitales y Clínicas Privados](#), E. Botero y D. Magallon, 2012)

<sup>33</sup> Energy costs represent around 8% of operational costs of clinics/hospitals. ([Estudio de Mercado sobre el Potencial de Eficiencia Energética y Energías Renovables para Hospitales y Clínicas Privados](#), E. Botero y D. Magallon, 2012).

<sup>34</sup> Average loan maturity in the system is around two years according to project team's estimates based on data provided by Bancoldex

<sup>35</sup> Project team's estimates based on data from Asobancaria, 2013.

<sup>36</sup> See Luis Alberto Zuleta J., "*Política Pública e Instrumentos de Financiamiento a las Pymes en Colombia*" in [Eliminando Barreras: El Financiamiento a las Pymes en América Latina](#), Carlos Ferraro (ed.), Chapter II, ECLAC, November 2011.

- 1.19 In this context, the CTF's IP for Colombia prioritizes a series of activities to address those barriers, including: (i) guarantees to mitigate the perceived risks regarding EE projects until a track record is developed; (ii) the combination of technical assistance and lending, through LFIs, to catalyze the financing of EE investments; (iii) training technical service providers and LFIs on how to market, analyze, structure, monitor and evaluate EE projects; and (iv) educating energy end-users on the savings achieved through technology improvements, and the payoffs of making the high initial investments.<sup>37</sup>

## **B. The problems and their factors**

- 1.20 There are two main problems addressed by the program. First, the positive correlation between competitiveness and environmental degradation. The main factor driving this issue is the need to expand coal-fueled electricity generation to meet a growing energy demand. As explained in ¶1.4 to ¶1.8, while the Colombian government prioritizes both enhanced competitiveness and environmental sustainability, the country is expected to continue to grow robustly in coming years, which may demand new generation capacity from fossil-fuel power sources, increasing GHG emissions. EE investments are seen as an important strategy for sustainable growth.
- 1.21 The second problem is the lack of investment in EE projects. The three main factors driving this issue are the following. First, lack of adequate investment financing for EE investment projects. As mentioned before, LFIs lack capacity to market, analyze and structure EE deals, and are uncertain about their returns and losses. LFIs tend to apply a traditional "asset-based" lending approach when they finance these projects and are not willing to rely upon the cash flows generated by EE investment projects as a basis for loan repayments. In addition, restricted access by firms, particularly SMEs, to investment financing at adequate rates and maturities limits their interest in investing, as they may not have enough cash to cover the high initial costs of their projects. Moreover, the higher costs of cleaner technologies relative to that of traditional ones may exacerbate further the pressure on firms' cash flows, discouraging the undertaking of this kind of investments.<sup>38</sup>
- 1.22 Second, the firms' knowledge gap on energy efficient technology. On the knowledge front, most relevant market players confront information and knowledge gaps. First, firms lack knowledge on the economic benefits of more efficient equipment and processes, becoming a major barrier on the demand side of the market. While firms' owners and managers may understand conceptually that more efficient equipment can save them money, they do not know the scale of those savings, the costs and returns of EE measures, and how to analyze, structure, implement and monitor

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<sup>37</sup> See in particular ¶71-72 and ¶76-77 of the original CTF's Investment Plan for Colombia.

<sup>38</sup> Currently, the local financial system is unable to offer financing for investment projects at maturities of more than 5 years. "Análisis de Barreras para el Desarrollo de Proyectos de Eficiencia Energética en Colombia", Greenmax, AF-Mercados EMI, SQ Consult, IFC, 2011 and "Seminario Mecanismos e Instrumentos de Financiación para Proyectos de Eficiencia Energética en Colombia", UPME, 2011.

technically-robust and financially-viable EE projects.<sup>39</sup> Furthermore, when choosing amongst alternative capital investments, they may prefer to invest in lower return projects, whose benefits appear to be greater in the short term.

- 1.23 And third, the lack of financial capacity of local technical service providers. Although technical service providers are knowledgeable on alternative technologies and on how to structure technically-robust EE projects, they have: (i) lack of knowledge on their financial aspects; (ii) limited capacity to accurately measure their energy savings; and (iii) a small capital base to invest directly in technologies (as is done in other countries under the Energy Services Companies -ESCOs- model).

### C. Justification

- 1.24 In order to address the problems identified above, the proposed program, as explained in more detail in [Characteristics of the Program](#), will offer an integrated approach, based on financing and technical assistance,<sup>40</sup> to address existing barriers that limit the supply of and the demand for investment financing for EE projects. The services sector accounts for the largest share of GDP in Colombia, and within this sector the government prioritized the hotel and clinic/hospital sub-sectors due to: (i) their economic and social importance at the national and regional levels; and (ii) their potential to demonstrate the benefits of both EE technologies and the proposed integrated financing model not only in those sub-sectors but also in all of the services sector. The program is aligned with Colombia's national policies and development plan, the Banks country strategy with Colombia, its Ninth General Capital Increase (GCI-9) Goals and its policies and strategies.

- 1.25 **The country's sector strategy.** The 2010-2014 NDP "Prosperity for All"<sup>41</sup> highlights the importance of promoting productivity and competitiveness of its productive sectors, stressing the role of MSMES. The NDP section on Sustainable Growth and Competitiveness identifies the tourism sector (and in particular hotels and health tourism) as a priority sector. Both the NDP<sup>42</sup> and the government's "Institutional Strategy for the Articulation of Policies and Actions Plans on Climate Change"<sup>43</sup> acknowledge the challenge to achieve the unprecedented growth and productivity goals of the NDP in a sustainable manner and highlight the importance to promote EE measures. The proposed

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<sup>39</sup> See: "Análisis de barreras para el desarrollo de proyectos de eficiencia energética en Colombia", Greenmax, AF-Mercados EMI, SQ Consult, IFC, 2011 and "Seminario Mecanismos e Instrumentos de Financiación para proyectos de eficiencia energética en Colombia", UPME, 2011.

<sup>40</sup> For an impact evaluation of a successful EE financing program that combined technical assistance, financial incentives and project financing to help medium and large customers adopt energy efficiency measures to reduce their electrical energy consumption and demand. "[Commercial & Industrial Custom and New Construction Program: Impact and Process Evaluation](#)", ECONOLER, 2011.

<sup>41</sup> See the references on the importance of supporting MSMES development and the health tourism in the chapter on [Sustainable Growth and Competitiveness](#) as well as hotels in the section on tourism as a driver for regional development.

<sup>42</sup> In particular section D. 2 of the Plan's chapter on [Environmental Sustainability and Risk Prevention](#) refers to reinforce the goals of the PROURE and the importance of promoting efficiency technologies in various sectors of the economy, including the services sector.

<sup>43</sup> [CONPES 3700, 2011](#).

program is aligned with both plans as it seeks to support strategic services sub-sectors in accessing finance to implement EE measures that enhance their competitiveness while promoting GHG emissions reductions. Finally, the program supports the implementation of Colombia's LCDS and hence its image as a progressive, carbon efficient country.

- 1.26 **Alignment with GCI-9 and the Bank's strategies and policies.** The program is aligned with the IDB Country Strategy with Colombia 2012-14 (GN-2648-1). Indeed, it supports the promotion of lines of credit and the development of financial products (insurance, savings, microcredit, micro-franchises) and nonfinancial products (technical assistance for small and medium-sized enterprises) through second-tier banks (¶3.11 of the strategy.) The program also supports specific areas of work identified in the strategy such as support to MSMES (¶3.10. and ¶3.11 of the strategy) and EE (¶3.42 of the strategy).
- 1.27 The program is aligned with the Bank's GCI-9's lending targets for Institutions for Growth / Social Welfare and Protecting the Environment and Responding to Climate Change. It is also supportive of the Bank's priorities set in its Integrated Strategy for Climate Change Adaptation and Mitigation (¶1.3, ¶2.9, and ¶3.14 of document GN-2609-1), and of its energy sector policy.
- 1.28 The program will be coordinated with ongoing activities and projects with Bancóldex, including a recently approved loan operation (CO-L1132; 2949/OC-CO), and a TC (CO-T1328) for US\$250,000 to support the detailed design of the financing line and of an innovative financing model for EE projects. The program will also be coordinated with other Bank/CTF programs that support EE such as a Non-Sovereign Guarantee Green Guarantee Mechanism for Bancolombia (CO-L1104). The program is expected to overcome existing market barriers and to provide important lessons for future programs within the EE program of the revised CTF's IP for Colombia.

#### **D. Objective, components and characteristics**

- 1.29 The program's goal is to support Colombia's efforts to enhance the competitiveness of the hotel and clinic/hospital sub-sectors, while reducing GHG emissions, through the piloting of an innovative model to finance model for EE projects. The proposed loan's objective will be to increase EE investments in hotels and clinics/hospitals. To achieve that objective, a complementary TC (CO-T1332) will help to build up the awareness and capacities of Bancóldex, LFI and other relevant market actors on the structuring, financing, monitoring and evaluation of competitiveness-enhancing, EE projects. See Characteristics of the Program to understand how the financing provided will be combined with technical assistance activities to support the development of the market for EE investments and financing.
- 1.30 The program will have one component: US\$10 million in CTF funding for a rediscount credit line to finance EE projects of eligible firms. The financing of EE individual investment projects to be funded with program resources will be complemented with the financing of similar investment projects to be funded with resources (for up to US\$10 million) of a recently approved loan operation

(¶2.1). The credit line will be provided by Bancóldex to eligible LFIs so that they, in turn, can offer sub-loans at adequate terms and conditions to eligible hotels and clinics/hospital for the financing of eligible EE investment projects.<sup>44</sup> CTF funds will be provided to Bancóldex as a loan in US Dollars.

- 1.31 The financing provided under the program will also be complemented with non-financial activities, to be funded by a US\$750,000 CTF, non-reimbursable TC (CO-T1332) (Annex IV), to support required market structuring and capacity building efforts as well as program execution. Among other things, the TC will finance activities aimed at:
- a. Stimulating the demand for financing by eligible firms (hotels, clinics and hospitals) and support the preparation, through technical services providers, of technically robust, bankable projects that can be monitored for results. The technical backstopping for the preparation and implementation of projects would be financed by the program;
  - b. Support Bancóldex in designing a concessional rediscount credit line to address the specific costs, returns and payback periods of EE projects;
  - c. Develop and implement risk management tools such as performance insurance policies, performance-based payment systems for technical services providers, and technical verification standards and processes that engage beneficiaries and LFIs in undertaking and financing, respectively, EE investment projects.

## **E. Key results indicators**

- 1.32 The main outcomes of the program will be the percentage reductions in energy costs and GHG emissions of beneficiary firms relative to that of comparable, non-beneficiary firms. The intermediate outcomes of the program will be the percentage reduction in energy costs and GHG emissions<sup>45</sup> of beneficiary firms during program execution. The outputs will be: (i) an increase in the number of hotels that gain access to investment finance for EE projects; (ii) an increase in the number of clinics/hospitals that gain access to credit for EE investment projects; and (iii) an increase in the annual dollar amount of medium-and long-term loans granted by the program to EE projects in hotels and clinics/hospitals, respectively ([Results Framework](#)).
- 1.33 It is expected that the market structuring efforts and risk mitigation tools to be piloted under the program ([Characteristics of the Program](#)) could also result in increased market confidence on the services provided by technical services providers as well as in a lower perception of risk by LFIs and hotels and clinics/hospitals on EE projects, paving the way for future replication of the program by other firms in the same sub-sectors and other sectors based exclusively on the actual economic returns of EE projects.

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<sup>44</sup> See definition of eligible projects in ¶2.4 below.

<sup>45</sup> If the technology improvements proposed by this program (¶2.4a) were adopted in 90 hotels and 34 clinics/hospitals, the potential of energy savings and associated GHG emissions would be 68.7 GWh/year and 15,276 TCO<sub>2</sub>e, respectively. (Opt. Cit 27 and 31, E. Botero y D. Magallon, 2012).



- 1.34 Additionally, it is estimated that the project's benefits would extend far beyond environmental or economic gains. By lowering energy costs, resources can be re-invested in the business or invested elsewhere in the economy, resulting in more jobs: (i) some jobs would be created for the manufacture and installation of new equipment, and in industries supplying the clean energy sector; and (ii) job expansion in beneficiary firms, where women are more represented, offers additional opportunities for gender-inclusiveness.

## II. FINANCING STRUCTURE AND MAIN RISKS

### A. Financing instruments

- 2.1 **Origin and use of resources.** This proposed program will be funded with US\$10 million from the Clean Technology Fund. The financing of EE individual investment projects to be funded with program resources will be complemented with the financing of innovation and mitigation of environmental impacts projects to be funded with resources (for up to US\$10 million) of a recently approved loan operation (CO-L1132; 2949/OC-CO).<sup>46</sup> The proposed program will also be complemented with a TC (CO-T1332), (Annex IV) to be funded with non-reimbursable CTF resources.
- 2.2 Program resources will allow Bancóldex to provide rediscount financing to eligible LFIs,<sup>47</sup> which, in turn, will be able to provide sub-loans on adequate terms to eligible hotels and clinics/hospitals for eligible EE projects. The program's conditions will be set out in its Operational Regulations (OR).
- 2.3 The financing provided to LFIs under the program will have the following characteristics: (i) it will be provided by rediscounting; (ii) it will be in Colombian *Pesos* (COP) or US dollars (US\$); (iii) it will have variable rates, with a spread that will be lower than those of Bancóldex's traditional modernization lines, but equal or higher than the average market rate (for example DTF or IBR<sup>48</sup>); (iv) Bancóldex will assume the risks of the LFIs; and (v) the LFIs would assume the sub-borrower's project risks.
- 2.4 Bancóldex will provide financing to firms' sub-projects under the following conditions: (i) Financing: on a demand basis, the program will finance eligible LFIs, for a maximum period of 8 years, a grace period of at most 12 months, and at a discount rate that will be lower than those of Bancóldex's traditional modernization lines, but equal or higher than the market's average funding rate; (ii) Eligibility: investment projects of public and private, small- and medium-sized hotels and clinics/hospitals, as well as of a few large-sized ones,

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<sup>46</sup> Such operation (CO-L1132; 2949/OC-CO, US\$200 million) recently approved under an existing CCLIP (CO-X1007) seeks to strengthen the competitiveness of eligible firms through the financing of investment projects for: (i) innovation and technological development; and (ii) the mitigation of environmental impacts.

<sup>47</sup> See [Colombia's Financial Sector Assessment](#).

<sup>48</sup> DTF is the weighted average of the interest rates of the 90-day certificates of deposit offered by the Colombian financial system. IBR is the reference short-term interest rate denominated in COP that reflects the price at which banks are willing to offer or take deposits in the money market.

on eligible EE technologies, such as: replacement of air conditioning units, air conditioning control systems, solar systems for hot water, high efficiency boilers, pool acclimatization, and co-generation; and (iii) Sub-loans characteristics: (a) be denominated in COP or US\$; (b) have an interest rate freely negotiated between eligible firms and LFIs, taking into account client and sub-project risks and the low discount rate offered by Bancóldex; (c) have a maximum repayment period of 8 years and a grace period of at most 12 months; and (d) be capped at a maximum amount to be set in the OR, though the possibility of co-financing from LFIs and beneficiaries will be allowed<sup>49,50</sup>.

**Cost of the program and source of financing (US\$)**

<b>Investment component</b>	<b>CTF*</b>	<b>Total</b>
Credit	10,000,000 (100%)	10,000,000 (100%)
TC	750,000 (100%)	750,000 (100%)

**B. Fiduciary risks**

2.5 Fiduciary risks in financial and procurement management are low (Annex III).

**C. Environmental and social safeguard risks**

2.6 This operation is a financial intermediary operation governed primarily by Directive B.13 of OP-703 and therefore it is not categorized. The substitution of old for new EE technologies will result in energy savings and hence will have a positive (if limited) impact on climate change by reducing GHG emissions. Furthermore, due to the nature of the investments to be financed and its main beneficiaries, mostly SMEs, additional negative environmental and social impacts from the facilities themselves are not foreseen. However, this type of projects could have adverse impacts on the environment if replaced units are not withdrawn from circulation and properly disposed. To mitigate this risk, an Equipment Decommissioning and Disposal Protocol will be part of the program’s OR to identify the potential environmental and social risks associated with the EE technologies eligible under the program, and to ensure that LFIs and the sub-loan beneficiaries implement the Protocol and any other mitigation measure applicable in accordance with Bancóldex’s own Environmental and Social Risk standards. Specific requirements to be included in the OR and the loan agreement are described in the Environmental and Social Management Report ([ESMR](#)).

**D. Development and public management/governability risks**

2.7 The program confronts two important development risks for which appropriate mitigation measures have been devised. They are: (i) a potential lack of demand for financing of EE projects by beneficiary firms; and (ii) Bancóldex’s difficulty to lend loan proceeds in US\$ in the local financial market so as to generate the return in COP that would be required to support

<sup>49</sup> The financing of EE projects in a few strategic and influential large beneficiaries with CTF resources will be allowed for demonstration purposes to other smaller beneficiaries, as recommended by the CTF’s IP. See ¶80- ¶82 of the CTF’s IP. The maximum credit amount for these projects would be US\$720,000.

<sup>50</sup> The program is expected to support around 90 hotels and 34 clinics/hospitals for an estimated average credit amount per sub-project of US\$161,290. Op. Cit. 47.

the program's concessionality. In addition, the program confronts a public management/governability risk if Bancóldex loose or reduce its interest or commitment to the program due to operational difficulties or high transactions costs. The Risk Assessment Matrix presents more information on these risks and their appropriate mitigation measures.

### III. IMPLEMENTATION AND MANAGEMENT PLAN

#### A. Summary of implementation arrangements

- 3.1 The borrower and EA will be Bancóldex. The Republic of Colombia, as guarantor, will only guarantee all the financial obligations<sup>51</sup> derived from the Loan Contract to be entered into between the borrower and the Bank. Pursuant to OP-303 "Guarantees from Borrowers", a joint and several guarantee (financial and perform obligations) from the governments is required, therefore it is proposed that a partial waiver to the Bank's policy on guarantees be granted. Bancóldex has the necessary fiduciary and operational capacity for the successful execution of the program, as it is governed by the Financial System Act and is subject to oversight and monitoring by the Superintendence of Finance. Also, it operates as a second-tier bank that uses a network of LFIs. Bancóldex has a long track record implementing IDB operations, and the government has chosen it as one of the entities that will support its GHG emissions reduction efforts. Bancóldex is a solvent institution with exemplary risk management practices ([Bancóldex's Financial Assessment](#)).
- 3.2 Execution and Administration. For the purposes of this program, Bancóldex will be responsible for: (i) executing and supervising the appropriate use of loan resources; (ii) providing in due time and form the necessary human, technological, and budgetary resources; and (iii) delivering to the Bank the required documentation for disbursements and other activities for execution.
- 3.3 **As a condition prior to first disbursement, the EA will provide evidence, to the Bank's satisfaction, of: (i) the formal designation of a Program Coordinator; (ii) the entry into effect of the OR agreed with the Bank; and (iii) a plan of investments for the first 180 days of the program.**
- 3.4 The provisions governing program execution, financial intermediaries' participation, and eligibility of sub-loans will be established in the OR, in accordance with Bancóldex and Bank policies, Colombian laws, and practices in Colombia's financial industry. The OR will: (i) reflect program characteristics; (ii) stipulate the conditions for the eligibility of sub-projects; and (iii) require the Bank's no objection for future modifications.
- 3.5 LFIs subject to oversight and monitoring by the Superintendence of Finance may be eligible to participate in the program. They will be responsible for:

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<sup>51</sup> In accordance with the provisions set forth in Decree No. 2681 and in Article 40 of Law 80, the Republic of Colombia can only guarantee the financial obligations derived from loan contracts. This practice has been done in past operations in which the Republic of Colombia has acted as guarantor.

(i) evaluating sub-borrower risk and making lending decisions in line with the OR and Bancóldex's operating regulations; and (ii) assuming responsibility *vis-à-vis* Bancóldex for the servicing and repayment of sub-loans, regardless of whether sub-borrowers meet their obligations.

- 3.6 No procurement actions or consultant services are contemplated for the proposed loan, since sub-borrowers will use market procurement practices.
- 3.7 Project resources are to be committed within 48 months from the effective date of the loan agreement. Bancóldex commits to a maximum investment period of 8 years, i.e. should an outstanding sub-loan be prepaid within that period, Bancóldex will reinvest the proceeds in technological development and mitigation of environmental impacts projects eligible under operation CO-L1132; 2949/OC-CO. Likewise, sub-loans amortizations will be used to repay the loan or to invest them in the aforementioned types of projects.
- 3.8 Disbursements shall be made through advances. Given the operation's characteristics, loan will be disbursed based on demand, whose structuring will begin in the first year of execution. Bank's disbursements will be based on the value of the structured demand received from Bancóldex. Such demand will be demonstrated through evidence on the approval of eligible sub-projects by a technical validator to be hired with funds from TC CO-T1332.
- 3.9 Financial statements and the eligibility of project expenses shall be audited annually by an independent audit firm acceptable to the Bank hired and paid by Bancóldex. The firm will report on the eligibility of program expenses, verify the existence of endorsed notes to Bancóldex, and perform physical inspections to projects financed with loan resources to verify implementation of EE investments. The program's audited financial statements will be sent to the Bank no later than four months after the close of the EA fiscal year following procedures and terms of reference previously agreed with the Bank.

## **B. Summary of arrangements for monitoring results**

- 3.10 **Reports.** The program will be monitored through semiannual reports prepared by the EA and presented to the Bank within 60 days after the close of each 6 month period, measuring progress on the results indicators (Annex II), and on the fulfillment of the eligibility criteria at project and program levels.
- 3.11 **Evaluation.** The borrower and the Bank will conduct a midterm evaluation within 24 months from the date of the first disbursement or once 50% of the loan has been committed, whichever occurs first. The evaluation will assess progress in accomplishing program objectives and outcomes based on the Results Framework in order to identify any corrective action required. The borrower will provide the information necessary for the Bank to conduct a Project Completion Report (PCR), to be carried out 6 months after the end of the execution period. Periodical monitoring meetings are also scheduled. The [Monitoring and Evaluation Plan](#) also contemplates an impact evaluation.
- 3.12 **Information.** Bancóldex will compile and maintain all information, indicators and parameters, including all documentation required to prepare the PCR and any *ex-post* assessment the Bank or the CTF may wish to conduct.

Development Effectiveness Matrix			
Summary			
<i>I. Strategic Alignment</i>			
<b>1. IDB Strategic Development Objectives</b>		Aligned	
Lending Program	Lending to support climate change initiatives, renewable energy and environmental sustainability.		
Regional Development Goals	i) Percent of firms using Banks to finance investments, and ii) Stabilization of CO <sub>2</sub> equivalent emissions (metric tons per habitant).		
Bank Output Contribution (as defined in Results Framework of IDB-9)	i) Micro/Small/Medium productive enterprises financed, and ii) Climate change pilot projects in agriculture, energy, health, water and sanitation, transport, and housing.		
<b>2. Country Strategy Development Objectives</b>		Aligned	
Country Strategy Results Matrix	GN-2648-1	Financial deepening increased, especially with greater access to credit for micro, small, and medium sized enterprises and the low income populations.	
Country Program Results Matrix	GN-2696	The intervention is included in the 2013 Country Program Document.	
Relevance of this project to country development challenges (If not aligned to country strategy or country program)			
<i>II. Development Outcomes - Evaluability</i>		Highly Evaluable	Weight
		8.4	Maximum Score
		8.1	10
<b>3. Evidence-based Assessment &amp; Solution</b>		8.1	33.33%
<b>4. Ex ante Economic Analysis</b>		8.5	33.33%
<b>5. Monitoring and Evaluation</b>		8.6	33.33%
<i>III. Risks &amp; Mitigation Monitoring Matrix</i>			
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.13	
<i>IV. IDB's Role - Additionality</i>			
The project relies on the use of country systems (VPC/PDP criteria)			
The project uses another country system different from the ones above for implementing the program	Yes	Bancoldex's financial management system.	
The IDB's involvement promotes improvements of the intended beneficiaries and/or public sector entity in the following dimensions:			
Gender Equality	Yes	It is expected that a job expansion in hotels and clinics/hospitals will benefit proportionally more women, due to their strong labor concentration in these sub-sectors.	
Labor			
Environment	Yes	The proposed project aims at reducing GHG emissions.	
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	The Bank has been supporting the institution through a TC (CO-T1198) to design and implement an environmental and social risks management system for all of its credit operations. Through other two technical cooperations (CO-T1153 and RG-T1866) the Bank has supported Bancoldex in developing climate change mitigation financing strategies.	
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	Yes	To the extent that the evaluation (dif in dif) determines that firms improve their competitiveness while reducing GHG emissions, this would confirm: i) that innovation-based solutions promote competitiveness and environmentalism, and ii) that the proposed piloted financing model could be replicated to other sub-sectors within the services sector.	

The intervention's goal is to support efforts in Colombia to enhance the competitiveness of the hotel and clinic/hospital sub-sectors, while reducing GHG emissions, through the piloting of an innovative financing model for Energy Efficiency projects. The proposed loan's objective would be to increase energy efficient investments in hotels and clinics/hospitals.

The intervention's logic is presented clearly and with adequate empirical evidence. The Results Matrix is complete, and the indicators are SMART. The document includes an economic analysis based on savings from energy efficiency. A complete Monitoring and Evaluation Plan is presented, which includes a proposed semi-experimental evaluation model based on Differences in Differences.

Major risks have been identified as well as their mitigation measures.

**RESULTS FRAMEWORK  
MATRIX OF INDICATORS**

<b>Project Objectives</b>	The program's goal is to support Colombia's efforts to enhance the competitiveness of the hotel and clinic/hospital sub-sectors, while reducing GHG emissions, through the piloting of an innovative model to finance model for EE projects. The proposed loan's objective will be to increase EE investments in hotels and clinics/hospitals. To achieve that objective, a complementary TC (CO-T1332) will help to build up the awareness and capacities of Bancóldex, LFIs and other relevant market actors on the structuring, financing, monitoring and evaluation of competitiveness-enhancing, EE projects.
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Impact Indicators	Unit of Measurement	Base Level	Target Level	Comments
1) Annual energy costs per occupied room/bed of beneficiary firms reduced relative to that of comparable, non-beneficiary firms by 2017.	Percentages	0	15	<p>Indicator is equal to the annual energy cost per occupied room/bed of beneficiary firms over that of comparable, non-beneficiary firms, minus 1, multiplied by 100.</p> <p>Note that the percentage reduction will be calculated towards the end of the program.</p> <p>The source of verification will be the results of the base line and end-of-the-program surveys. A complementary TC (CO-T1332) to the program includes budgetary resources to conduct the latter survey and the impact evaluation.</p>
2) Annual GHG emissions per occupied room/bed of beneficiary firms reduced relative to that of comparable, non-beneficiary firms by 2017.	Percentages	0	15	<p>Indicator is equal to the annual GHG emissions per occupied room/bed of beneficiary firms over that of comparable, non-beneficiary firms, minus 1, multiplied by 100.</p> <p>Note that the percentage reduction will be calculated towards the end of the program.</p> <p>The source of verification will be the results of the base line and end-of-the-program surveys. A complementary TC (CO-T1332) to the program includes budgetary resources to conduct the latter survey and the impact evaluation.</p>

Only one component	Unit of Measurement	Base: 2013	2014	2015	2016	2017	Target	
<b>Outputs:</b>								
1) Number of hotels that gain access to investment finance for EE projects from the program.	Number of Hotels	0	45	22	14	9	90	Bancóldex's information system for the program
2) Number of clinics/hospitals that gain access to investment finance for EE projects from the program.	Number of Clinics/Hospitals	0	17	8	5	4	34	Bancóldex's information system for the program
3) Dollar amount of medium-and long-term loans granted by the program to hotels for investments in EE projects.	US\$ million	0	6,8	3,5	2,1	1,3	13,7	Bancóldex's information system for the program
4) Dollar amount of medium-and long-term loans granted by the program to clinics/hospitals for investments in EE projects.	US\$ million	0	3,2	1,5	0,9	0,9	6,3	Bancóldex's information system for the program

<p><b>Outcomes:</b></p> <p>1) Reduction of Energy consumption of beneficiary firms.</p>	<p>GWh/year per occupied room/bed</p>	<p>0</p>	<p>34.3</p>	<p>17.2</p>	<p>10.3</p>	<p>6.9</p>	<p>68,7</p>	<p>The indicator is equal to the difference between the Kw/h per year per occupied room/bed of all beneficiary firms multiplied by the number of rooms/beds occupied in each consecutive year and the Kw/h per year per occupied room/bed of all beneficiary firms during the base line year multiplied by the number of rooms/beds occupied in that year. The last column adds the four years' totals.</p>
<p>2) Reduction of GHG emission of beneficiary firms</p>	<p>Tons of CO2 /year per occupied room/bed</p>	<p>0</p>	<p>7,638</p>	<p>3,819</p>	<p>2,291</p>	<p>1,528</p>	<p>15,276</p>	<p>The indicator is equal to the difference between Kw/h per year per occupied room/bed of all beneficiary firms multiplied by the number of rooms/beds occupied in each consecutive year multiplied by Colombia's GHG emissions factor and Kw/h per year per occupied room/bed of all beneficiary firms during the base line year multiplied by the number of rooms/beds occupied in that base year multiplied by Colombia's GHG emissions factor. The last column adds the four years' totals.</p> <p>The source of verification is Bancoldex's information system for the program. A complementary TC to the program contemplates budgetary resources to design and implement the system. The Technical Services Providers that will support beneficiary firms with the design and implementation of their projects will collect the data on the performance of the projects since that data will be the basis for their performance-based payments. See Annex Program Characteristics for this performance-based payment mechanism.</p>



## FIDUCIARY AGREEMENTS AND REQUIREMENTS

<b>Country:</b>	Colombia
<b>Project number:</b>	CO-L1124
<b>Name:</b>	CTF Energy Efficiency Financing Program for the Services Sector
<b>Executing agency:</b>	Banco de Comercio Exterior de Colombia (BANCOLDEX)
<b>Prepared by:</b>	Mylenna Cárdenas García, Fiduciary Financial Management Specialist; Ezequiel Cambiazo, Fiduciary Procurement Specialist

### I. EXECUTIVE SUMMARY

- 1.1 BANCOLDEX is the borrower and executing agency for the program. Fiduciary management was evaluated by means of an institutional capacity assessment and a fiduciary risk analysis of the program. BANCOLDEX has experience with IDB loan programs, and has demonstrated its capacity as a borrower and executing agency through two programs under the Conditional Credit Line for Investment Programs (CCLIP). Currently, it is satisfactorily implementing loan 2193/OC-CO “Financing of Investment Projects and Productive Restructuring and Business and Export Development,” and in December 2012, the Bank approved loan 2886/OC-CO “Program to Promote Outsourced Services,” which is scheduled to begin in 2013. According to the evaluation, BANCOLDEX has sufficient capacity to execute the loan’s financial management activities, and to administer the loan proceeds. Fiduciary risk in financial management is LOW.
- 1.2 BANCOLDEX is a second-tier financial entity with legal standing, administrative autonomy, and own assets; it is supervised by the Superintendency of Finance and is linked to the Ministry of Trade, Industry, and Tourism (MCIT). Because BANCOLDEX is not included in the General Budget of the Nation, it is not required to keep its accounts in and be subject to budgetary control by the public financial management system. BANCOLDEX uses a reliable, integrated system with online accounting, cash management, and budget execution modules.
- 1.3 The total cost of the program is US\$20 million, of which US\$10 million will be financed by the IDB. The program does not involve financing from other multilateral agencies, and its execution period is 48 months.

### II. THE EXECUTING AGENCY’S FIDUCIARY CONTEXT

- 2.1 BANCOLDEX uses a reliable, integrated accounting system in AS/400 software, called the Financial and Accounting Information System, which has online accounting, cash management, portfolio, and budget applications; it receives information from the investment (Alfyn) and payroll applications. With this system,

independent accounting accounts can be maintained, managed, and monitored, making it possible to record project resources, which facilitates oversight and identification.

- 2.2 BANCOLDEX’s policies, procedures, and processes are well defined, which was determined and verified through the institutional capacity assessment and the supervision of loans in execution; it has received ISO-9001 certification for its quality management system. Its strengths include skilled personnel, functional information systems, and clear, well-defined procedures for each programmed activity; moreover, its technical team has good experience, continuity of service, and seniority in each of the areas of the institution, which ensures the quality of its fiduciary and administrative processes, and functional responsibility and efficiency.

### III. FIDUCIARY RISK EVALUATION AND MITIGATION ACTIONS

- 3.1 Although no fiduciary risks were identified for financial management, the following financial risks should be mitigated:

<b>Risk</b>	<b>Type</b>	<b>Rating</b>	<b>Mitigating action</b>	<b>Budget</b>
It is impossible to structure demand and difficult to prove its existence, which is required by the IDB for disbursing funds.	Inherent	High	- Publicize the economic and environmental benefits of adopting clean technologies through workshops, visits, etc.	US\$750,000 in a nonreimbursable technical cooperation operation
It is impossible to invest the loan’s dollar resources in the market to ensure a rate of return that makes it possible to provide concessional terms for the lines of credit in pesos.	Inherent	High	- BANCOLDEX promotes the dollar resources at market rates.	BANCOLDEX

The mitigation plan for these risks will be implemented as part of loan preparation and execution.

### IV. CONSIDERATIONS FOR THE SPECIAL CONDITIONS OF CONTRACTS

- 4.1 As conditions precedent to the first disbursement, the executing agency will demonstrate to the Bank’s satisfaction that: (i) the program coordinator has been formally appointed; (ii) the program’s Credit Regulations, agreed with the Bank, have entered into effect; and (iii) there is an investment plan for the program’s first 180 days, demonstrating the existence of the structured demand.
- 4.2 The exchange rate used for requesting advances of funds will be the rate in effect on the date the disbursement request is submitted. When submitting supporting documentation for expenditures, BANCOLDEX will use the exchange rate used to convert the disbursed resources from United States dollars to Colombian pesos (monetization rate).
- 4.3 The program’s financial statements will be audited annually.

## V. AGREEMENTS AND REQUIREMENTS FOR PROCUREMENTS EXECUTION

### 1. Procurement execution

- 5.1 The program has only one component, and involves onlending resources through subloans to private sector beneficiaries to improve the energy efficiency of their businesses so as to boost competitiveness.
- (i) Works, goods, and nonconsulting services will be procured in accordance with the provisions of Appendix 4 of document GN-2349-9 (March 2011).
  - (ii) Consultants will be selected and contracted in accordance with the provisions of Appendix 4 of document GN-2349-9 (March 2011).
- 5.2 **Procurement supervision:** Procurements made within the framework of the subloans will be subject to ex post review by the program's independent auditors.
- 5.3 **Special provisions:** None.
- 5.4 **Records and files:** Program files will be kept in the offices of the program executing unit, under appropriate security conditions.

## VI. FINANCIAL MANAGEMENT

- 6.1 **Programming and budget.** As BANCOLDEX is not included in the General Budget of the Nation, it does not cover its expenditures with resources from the public treasury. Rather, its expenditures are paid with revenue from its own operations as a lending institution. For this reason, it is not subject to budgetary control by the public financial management system. BANCOLDEX's budget is structured in accordance with its strategic action plan, which enables it to set the course of action for its lines of business for the year, and subsequently define investments by line (credit disbursement needs) and operating expenses, which are covered by internally generated funds, deposits, and debt acquired with financial entities. BANCOLDEX follows clear policies both for budget preparation and budget monitoring, which are defined in the budget planning and management processes established in its value chain and approved by senior management. The budgets for each fiscal year are approved by its board of directors. BANCOLDEX has tools for monitoring budget management including COGNOS PLANNING for making business projections, COGNOS FINANCE for tracking expenditures, and DWH-data warehouse for monitoring the different investment lines and other business units. The President's committees and the BANCOLDEX board of directors monitor budget execution. Program resources will form part of BANCOLDEX's budget.
- 6.2 **Accounting and information systems.** BANCOLDEX will be responsible for program accounting, which will be performed in accordance with the accrual method, using a reliable, integrated system with online accounting and treasury applications. It follows the standards prescribed by Colombia's Superintendency of Finance for recording its operations and preparing its financial statements; for what

is not established in those standards, BANCOLDEX follows the generally accepted accounting standards of Colombia established in Decree 2649 of 1993. The program's audited financial statements will be prepared in accordance with cash-based accounting, using the information generated by the portfolio application, which identifies the operations financed by the loan. BANCOLDEX also has its own accounting policies, which form part of the integrated management system. BANCOLDEX uses the chart of accounts of the financial sector. This notwithstanding, and in accordance with Law 1314 of 2009 and Decree 2784 of December 2012, BANCOLDEX is in the process of implementing the International Financial Reporting Standards (IFRS), which are to be reported as a parallel to Colombia's generally accepted accounting principles (GAAP) in 2014, and enter fully into effect in 2015. Although the core of the system will initially continue to work with the Colombian GAAP, gradual adjustments will be made in the systems so that separate IFRS-based accounting will be fully operational in 2015.

- 6.3 **Disbursements and cash flow.** Disbursements will be made by means of advances of funds to a dollar account in the name of BANCOLDEX. Given the nature and characteristics of the operation, the loan will be disbursed on the basis of demand, the structuring of which will initiate in the first year of execution. The amount of the first disbursement by the IDB will be the value of the structured demand. BANCOLDEX will demonstrate existence of demand through evidence of approval of the subproject by a technical evaluation agency that will be commissioned for that purpose with resources from a technical cooperation operation that supplements the loan, after its financial evaluation. The disbursement request should be accompanied by cash-flow projections, the bank reconciliation of the special account, and information on the status of technical and fiduciary performance commitments.
- 6.4 BANCOLDEX can render accounts to the IDB on the investment when it transfers the resources in pesos to the intermediary bank. BANCOLDEX will make available to the auditor and to the IDB the promissory notes endorsed to its name, for all the credits reported, as well as evidence of the transfer of resources to the intermediary bank. These documents will be reviewed ex post by the auditors.
- 6.5 The exchange rate for presenting expense vouchers will be the rate used to convert the resources disbursed in United States dollars to Colombian pesos (monetization rate).
- 6.6 **Internal control and internal auditing.** BANCOLDEX has an internal audit office that reports to the board of directors' audit committee and, administratively, to the office of the president of BANCOLDEX. It has implemented the Standard Internal Control Model for State Agencies (MECI 1000:2005), which is based on the COSO international standard, and is aligned and coordinated with the internal control system established by the Superintendency of Finance in its Basic Legal Circular. BANCOLDEX has a code of good corporate governance, an audit committee made up of three members of the board of directors, a control policy, audit regulations, an audit manual, and a quality and operations manual. Moreover, its work follows the standards of the Institute of Internal Auditors (IIA). Because it

- is monitored and overseen by the Superintendency of Finance, BANCOLDEX has methodologies and manuals for managing risk as required by law (market, liquidity, operational, asset laundering, terrorism financing, and information security). Every year, BANCOLDEX submits to its board of directors and General Shareholders Assembly its report on the management of the evaluation of the internal control system, pursuant to a legal requirement of the Superintendency of Finance established in external circulars 14 and 38 of 2009, incorporated in Title I, Chapter IX, numeral 7 of the Basic Legal Circular.
- 6.7 Based on the principles of self-regulation, self-management, self-control, and continuous improvement, BANCOLDEX commissioned an independent evaluation of its internal control system in 2011, which yielded satisfactory results. The report for fiscal year 2012 is being prepared and will be submitted to the board of directors and General Shareholders Assembly in March 2013. BANCOLDEX's commitment to maintaining and continuously improving the internal control system is an evident strength; this demonstrates its responsibility with regard to the national government's proposed plans and directives on internal control and quality management, which is supplemented by BANCOLDEX's risk management systems. The services of the Office of Internal Auditor will be used given the high level of confidence in it.
- 6.8 **External control and reporting.** The program's financial statements and expenditure eligibility will be audited each year by an independent audit firm acceptable to the Bank, which will be contracted by BANCOLDEX. The program auditor can be the same firm that audits the financial statements of BANCOLDEX and other projects in execution, making it possible to optimize costs and ensure comprehensive control of the executing agency and its management of the program. The auditor will submit a report on the eligibility of program expenditures, confirm the existence of the promissory notes endorsed to BANCOLDEX, and make physical inspection visits to the projects financed with loan proceeds in order to confirm implementation of energy efficiency investment projects in hotels, clinics, and hospitals. BANCOLDEX will cover the cost of the audit services. The program's audited financial statements will be submitted to the IDB at the latest four months after the close of each financial year of the executing agency, in accordance with the procedures and terms of reference previously agreed with the Bank.
- 6.9 **Financial supervision plan.** Based on the results of the institutional capacity assessment and the program risk analysis, the financial specialist will perform, at the very least, one in situ review per year as well as desk reviews of the annual and final audited financial statements. The auditor will make in situ review visits to the hotels, clinics, and hospitals. Supervision visits of fiduciary financial management will include verification of the financial and accounting arrangements used to administer the program, and monitoring of the implementation of any recommendations that may have been made by the program's independent auditor, among other things.

- 6.10 **Execution mechanism.** BANCOLDEX will be the borrower and the executing agency, and will be legally responsible to the IDB for repayment of the debt, with the guarantee of the Republic of Colombia; it will execute the program's technical and financial activities. BANCOLDEX will receive the loan proceeds in a dollar account, and invest them in the market so that the present value of the rate of return can be used to offer the concessional terms required in terms of amount, term, grace period on principal, discount rate, amortization, and currency of the peso lines. The loan resources will be transferred by BANCOLDEX to the intermediary financial institutions using its usual discount mechanism, and will be backed by a promissory note endorsed to BANCOLDEX that will be kept in the system so as to be available for the auditor's ex post review. BANCOLDEX can render accounts on the investment to the IDB when it transfers resources in pesos to the intermediary bank.
- 6.11 **Other financial management agreements and requirements.** There are no additional agreements to those established in this document. This notwithstanding, the fiduciary agreements and requirements set out in this annex can be adjusted in accordance with program developments, based on updates of the risk analysis and institutional capacity assessment performed during program execution.

**Mitigation of GHG Emissions through Energy Efficient Investments in the Hotels and  
Clinics/Hospitals Sub-Sectors  
CO-T1332**

**TC ANNEX**

**I. BASIC INFORMATION FOR TC**

<b>Country/Region:</b>	Colombia
<b>TC Name:</b>	Mitigation of GHG emissions through energy efficient investments in hotels and clinics/hospitals sub-sectors
<b>TC Number:</b>	CO-T1332
<b>Associated Loan/Guarantee Name:</b>	CTF Energy Efficiency Financing Program for the Services Sector
<b>Associated Loan/Guarantee Number:</b>	CO-L1124
<b>Team Leader/Members:</b>	Jose Juan Gomes Lorenzo (IFD/CMF), Team Leader; Maria Netto (IFD/CMF), Alternate Team Leader; Alvaro Concha (CMF/CCO); Jose Ramon Gomez (INE/CCO); Claudio Alatorre (INE/ECC); Maria Isabel Haro (IFD/CMF); Erin Compton (IFD/CMF); Stephanie Suber (IFD/CMF); and Javier Ignacio Bedoya Denegri (LEG/SGO).
<b>Date of TC Abstract authorization:</b>	June 14, 2013
<b>Beneficiary (countries or entities which are the recipient of the technical assistance):</b>	External Trade Bank of Colombia (Bancóldex)
<b>Executing Agency and contact name</b>	Bancóldex
<b>Donors providing funding:</b>	Clean Technology Fund (CTF)
<b>IDB Funding Requested:</b>	USD 750,000 from the Clean Technology Fund
<b>Local counterpart funding, if any:</b>	USD 120,000 (in kind from Bancóldex )
<b>Disbursement period (which includes Execution period):</b>	36 months disbursements , 30 months execution
<b>Required start date:</b>	July 1 <sup>st</sup> , 2013
<b>Types of consultants:</b>	Firms and individuals
<b>Prepared by Unit:</b>	IFD/CMF
<b>Unit of Disbursement Responsibility:</b>	IFD/CMF
<b>TC Included in Country Strategy (y/n):</b>	Yes
<b>TC included in CPD (y/n):</b>	Yes
<b>GCI-9 Sector Priority:</b>	The proposed TC is closely related to two institutional priorities of the IDB under the GCI-9. They are: (i) Institutions for Growth / Social Welfare; and (ii) Protecting the Environment and Responding to Climate Change.

**II. DESCRIPTION OF THE ASSOCIATED LOAN/GUARANTEE**

2.1 CTF Energy Efficiency Financing Program for the Services Sector (CO-L1124).

### III. OBJECTIVES AND JUSTIFICATION OF THE TC

- 3.1 This Technical Cooperation (TC) will support the loan operation: CO-L1124 CTF Energy Efficiency (EE) Financing Program for the Services Sector. The objective of CO-L1124, is to support Colombia's efforts to enhance the competitiveness of the hotel and clinic/hospital sub-sectors, while reducing GHG emissions, through the piloting of an innovative financing model for EE projects. Its specific objective would be to increase EE investments in hotels and clinics/hospitals. CO-L1124 will be funded with a US\$10 million loan from IDB's Clean Technology Fund (CTF) Trust Fund resources. These resources will be complemented with US\$10 million in counterpart contributions from an IDB loan under execution with Bancóldex .
- 3.2 As a result of market studies on the potential to finance EE projects in Colombia, it was identified that many of the barriers to access investment credit are either related to the lack of knowledge by potential clients and/or by perceived risks by Local Financial Institutions (LFIs) and clients. In order to address these barriers, a dedicated financing line needs to be accompanied with a series of activities to ensure that actors are aware of the benefits of EE investments, perceived risks are addressed, and that the projects financed actually result in energy savings and GHG emission reductions (see [Figures 1 and 2](#)). To that end, this TC has as its main objective to support the execution of operation CO-L1124 through: (i) the structuring of demand, by training and promoting the financing line among LFIs and potential beneficiaries; (ii) promoting pilot cases through energy audits and detailed project design in order to generate bankable proposals that would gain access to investment credit from Bancóldex 's credit line so as to demonstrate EE benefits; and (iii) designing and implementing a system for the continuous monitoring of projects and the assessment of their results in terms of energy savings and GHG emission reductions.
- 3.3 The TC is aligned with the "IDB Country Strategy with Colombia 2010-14". In particular, it seeks to support the promotion of lines of credit and developing financial products (insurance, savings, microcredit, microfranchises) and nonfinancial products (technical assistance for small- and medium-sized enterprises) through second-tier banks (Bancóldex) (¶3.11 of the strategy.) The TC will also result in further dialogue and knowledge support on EE (¶3.42 of the strategy).
- 3.4 This TC is also consistent with the GCI-9's lending target for Climate Change, Renewable Energy and Environmental Sustainability and with the IDB's priorities set in its Integrated Strategy for Climate Change Adaptation and Mitigation, and Sustainable and Renewable energy, approved in March 2011 (¶1.3, ¶2.9 and ¶3.14 of document GN-2609-1).
- 3.5 The TC will integrate results from other studies and technical cooperations undertaken with Bancóldex , including four TC projects to support Bancóldex in developing and implementing green lines, namely CO-T1198, CO-T1153, CO-T1328, and RG-T1866.



#### IV. DESCRIPTION OF ACTIVITIES/COMPONENTS AND BUDGET

- 4.1 The credit line to be created with resources from CO-L1124 is expected to be complemented by 3 main elements as incentives (more description in [Figures 1 and 2](#) and [Characteristics of the Program](#)):
- i. Technical backstopping by energy services providers to beneficiary firms (which should be amortized through the credit line itself) in order to: (i) estimate potential energy savings; (ii) design eligible projects; (iii) develop monitoring plans; and (iv) measure and report energy savings and GHG emissions reductions achieved.
  - ii. Identification of the terms and conditions of the financing line so that it takes into account the costs and returns of EE investment projects (which will be partly defined based on studies now under way);
  - iii. Risk management tools through: (i) a third party verifier that will assess both: (a) the technical quality and expected results of project proposals made by technical services providers on behalf of potential beneficiaries; and (b) the technical expertise of those providers; and (ii) the design of the contractual arrangements required by a performance insurance policy to be developed by a local insurance company in order to insure firms investing in EE against shortfalls in agreed energy savings during the loan repayment period of their EE investment.
- 4.2 The TC is intended to support the execution of operation CO-L1124 through 3 main components:
- 4.3 **Component 1:** Supporting the structuring of the demand side of the market by promoting the financing line and by training LFIs and potential beneficiaries on: (i) the benefits that can be obtained through EE investments in terms of energy savings and GHG emission reductions; and (ii) on the real or perceived risks associated with this type of projects. This component will include the development of a promotion strategy, including promotional materials and events. It will also include the development of the basic requirements and guidelines related to the technical services to be provided to project developers by energy services providers (e.g. basic technical and financial information of a project proposal, standard contracts with risk mitigation measures, specification of technical requirements for eligible projects, etc.) as well as the definition of the risks that the performance insurance policy would cover.
- 4.4 Two consultancies (individual and/or firm) will be hired to support the activities stipulated in Component 1. One individual consultant will be required to support Bancóldex with specific technical capacity. A consultancy firm or individual consultants will also be hired to support the development of workflows for the financing line operation as well as standards and examples of contracts and templates. The execution of this component will also entail the cost of consultants and events needed for outreach, training and consultation with relevant actors (such as Local Financial Institutions, technical service providers and potential clients).

- 4.5 **Component 2:** Promoting pilot examples of auditing of energy savings potential of specific clients and design of project proposal to gain access to credit and demonstrate its benefits. While technical backstopping for accessing the credit line would be implicitly integrated in the financing line structure itself and supported through component 1, it is considered that is also important to quickly demonstrate to the market successful project cases where clients can obtain positive returns and address some of the risk perceptions associated with energy efficiency projects. This component will support 6-8 potential eligible clients of the Bancóldex credit line with different sizes and typology to assess potential energy savings and prepare documentation to submit the project proposal according to the financing line specifications in order to gain access to credit.
- 4.6 One consultancy firm or individual consultants will be hired to support identification of pilot projects, undertaking energy auditing and supporting project preparation. The execution of this component will also entail fees and travel expenses for consultants.
- 4.7 **Component 3:** Designing and implementing a monitoring and evaluation system for the continuous supervision of projects and the assessment of their results in terms of energy savings and GHG emission reductions. One important element to mitigate perceived risks from the market is to ensure that a third party reviews project proposals from a technical point of view and ensures that energy services providers have the technical qualifications to design EE projects. Ensuring that results are tracked and monitored is also key to account for the energy savings and GHG reductions of the projects and the program as a whole. This component will include the design and implementation of an independent system that will control the quality of projects and ensure the proper reporting, monitoring and verification of the expected results of the projects and the program as a whole. As such, it will support the development of the necessary templates and a methodology to review projects and a registry or information system where Bancóldex can record all the activities undertaken under each sub-project proposal as well as the monitoring of sub-projects and program results. Finally, this component will support an impact evaluation of the program towards the end of the execution period.
- 4.8 The Colombian Institute of Technical Standards and Certification (Instituto Colombiano de Normas Técnicas y Certificación), ICONTEC will be hired through Sole Source Selection to develop the activities identified above. ICONTEC specializes in the development of tools that contribute to improving competitiveness through innovative services. Among the programs they have developed, there is a broad range of Management Systems programs for quality, environment, security and occupational health, as well as the training of auditors who seek to maintain and improve management systems. The institution has a unique combination of all the required qualifications for this contract. On one hand, ICONTEC has extensive experience in the development of important norms related to energy efficiency for various systems (including refrigeration, illumination, and appliances); while on the other, it has successfully demonstrated experience in developing trainings for energy managers on topics such as GHG inventories and the application of ISO norms on energy efficiency. No other institution in Colombia has all of the skills required for the program.

4.9 The execution of this component will also entail the organization of events for consultations on the requirements and conditions of the financing line with relevant actors (such as technical service providers and potential clients) as well as fees and travel expenses for consultants.

4.10 To ensure a proper execution of the proposed program, the project team will organize launching, mid-term and final review meetings/audio-conferences with Bancóldex and the consultants for each of the phases contemplated in the design and implementation of the planned activities.

**Indicative Results Matrix**

Expected results	Unit	Baseline		Year 1		Years 2 and 3		Expected Completion Date	Data Source
		Value	Year	Planned	Actual	Planned	Actual		
Component 1: # of technical services providers following the standards established in the financing line	#	0	2013	2		4		12/31/2014	IDB Systems Bancóldex dedicated registry
Component 1: # of LFIs and clients reached through meetings, e-mail, calls, mailing and social media	#	0	2013	200		100		12/31/2014	IDB Systems Bancóldex dedicated registry
Component 1: # of visits to dedicated web page with information about the project	#	0	2013	10		150		12/31/2014	Bancolex dedicated web site (google maps)
Component 1: # of outreach and training events organized	#	0	2013	1		5		12/31/2015	IDB Systems Bancóldex dedicated web site
Component 2: # of pilot project proposals designed for submission to the credit line for approval	#	0	2013	2		6		12/31/2014	IDB Systems Bancóldex dedicated registry
Component 3: # of projects certified and validated under the program	#	0	2013	10		70		05/01/2016	IDB Systems
Component 3: # of revisions of methodologies and templates	#	0	2013	5		5		12/31/2014	IDB Systems Bancóldex dedicated web site
Component 3: Information system serving as a repository of program results developed, running and updated	#	0	2013	1		1		12/31/2013	Bancóldex dedicated registry

4.11 The total amount of this operation is US\$750,000 which would be used to hire the services of experts to implement Components 1, 2, and 3 above as well as to pay for logistics of consultative events and related consultants' travel needs. Any contracting will be undertaken following Bank's policies and procedures. The contracting of individual

consultants will be done following the Policies for the Selection and Contracting of Consultants financed by the Bank (document GN-2350-9).

- 4.12 The counterpart resources for this project would be in kind resources from Bancóldex amounting to US\$120,000. These resources would cover Bancóldex’s own staff time and travel dedicated to the detailed design and execution of the program, office space and facilities for consultants supporting its detailed design and execution, support of Bancóldex’s IT staff for the design and implementation of the program’s registry or information system and, finally, logistic arrangements for planned events and workshops. The administrative and technical supervision of the proposed technical assistance program will be under the responsibility of IFD/CMF.

**Indicative Budget (in US\$)**

Activity/Component	Description	IDB/Fund Funding	Counterpart Funding	Total Funding
Component 1	Development of requirement standards and examples of contracts and templates	30,000	10,000*	40,000
	Promotion materials	20,000	20,000*	40,000
	Outreach events and training	80,000	40,000*	120,000
	Institutional capacity of Bancóldex	105,000	40,000*	145,000
Component 2	Pilot project proposals design (8)	160,000	n.a.	160,000
Component 3	Third Party verifier services	220,000	n.a.	220,000
	Monitoring methodologies and templates	20,000	n.a.	20,000
	Registry of monitoring reports	75,000	10,000*	85,000
	Impact evaluation of program CO-L1124 and final audit of proposed TC	40,000	n.a.	40,000
Total:		750,000	120,000*	870,000

\* In-kind contribution from Bancóldex.

**V. EXECUTING AGENCY AND EXECUTION STRUCTURE**

- 5.1 The Executing Agency (EA) will be Bancóldex. Bancóldex has the necessary fiduciary and operational capacity for the successful execution of the program, as it is governed by the Financial System Act and is subject to oversight and monitoring by the Superintendency of Finance. In addition, Bancóldex has a long track record implementing operations funded by the IDB, and the government has chosen it as one of the entities that will support its GHG emissions reduction efforts.
- 5.2 For the purposes of this program, Bancóldex will be responsible for: (i) executing and supervising the appropriate use of the resources obtained through the proposed TC; (ii) providing in due time and form the necessary human, technological, and budgetary resources; and (iii) delivering to the Bank the required documentation to comply with disbursements and other requirements for execution. As a condition prior to the first disbursement of the TC, the executing agency will provide evidence, to the Bank’s satisfaction, of the formal designation of a Program Coordinator. The project execution will be based on the results matrix mentioned above and the products and indicators contained therein.

- 5.3 Bancoldex will present to IDB the following types of reports: (i) progress reports every six months, within sixty (60) days from the end of the six months; and (ii) a final report within 6 months from the end of the last project activity executed. The contents of the reports will be jointly agreed between IDB and Bancoldex.
- 5.4 The executing agency will also provide to the IDB, the financial statements of the project, within 90 days after the date stipulated for its last disbursement. Such statements will be audited by an independent auditor selected and hired in accordance with IDB procedures.

## **VI. MAJOR ISSUES**

- 6.1 Given that the work proposed in this TC is highly technical, there is a risk of not obtaining good quality results if the work carried out by consultants is not properly monitored. For this reason, the proposal envisages ongoing monitoring activities and an overall evaluation of the program. Peer reviewers will also be asked to review the products developed.

## **VII. EXCEPTIONS TO BANK POLICY**

- 7.1 No exceptions to Bank policy are envisioned.

## **VIII. ENVIRONMENTAL AND SOCIAL STRATEGY**

- 8.1 Based on the Environmental and Social Safeguard Filter, the proposed technical assistance has been classified as category C. No potential negative environmental and/or social impacts of the TC were identified and therefore no mitigation strategy is required to address any impact. See [Safeguard Policy Filter Report \(SPF\)](#) and [Safeguard Screening Form \(SSF\)](#).

## **IX. ANNEX**

- 9.1 [Procurement Plan](#)

## **X. REQUIRED ELECTRONIC LINKS**

- 10.1 Link I: [Letter of Request](#)
- 10.2 Link II : [Terms of Reference: Components 1, 2, and 3](#)

## PROCUREMENT PLAN

**Country:** Colombia  
**Executing agency:** Bancóldex  
**Project:** “Annex IV – CO-T1332 - Mitigation of GHG emissions through EE in the hotels and clinic\hospital sub-sectors”  
**No. Of Project and contract:** CO-T1332

**Brief description of the objectives and components of the Technical Cooperation:**  
The main objective of this technical cooperation is to support the execution of the operation CO-L1124 by addressing informational and technical barriers and other real or perceived risks that have prevented the supply of and demand for financing for EE investment projects. In particular it will support the design of:

Component 1: Supporting the structuring of the demand side of the market by promoting the financing line and by training LFIs and potential beneficiaries;

Component 2: Promoting pilot examples of auditing of energy savings potential of specific clients and design of project proposal to access the credit and demonstrate its benefits; and

Component 3: Designing and implementing a monitoring and evaluation system for the continuous supervision projects and the assessment of their results in terms of energy savings and GHG emission reductions.

One individual consultant and a firm or firm will be hired to implement component 1, one consultancy firm will be hired to implement component 2; and one consultancy firm and individual consultants will be hired to implement component 3.

The following expenditures will be ineligible: (i) salaries for civil servants in Colombia hired as consultants or otherwise; (ii) purchase of vehicles; (iii) foreign training and study tours; and (iv) salaries and travel of the Bank staff and consultants. These expenditures should be financed either with local counterpart resources or loan resources as long as the corresponding justification is addressed in the document pursuant to the criteria set forth in the Guidelines for the eligibility of expenditures in investment loans (document CC-6004-2).

**Starting date for signing of contract:** August 2013  
**Date of last disbursement:** November 2016

**Address of the division responsible for the execution of acquisition plan:**  
Inter-American development bank  
Capital Markets and Financial Institutions Division (IFD/CMF)  
1300 New York Ave, NW, Washington DC 20577, USA

## Period covered by this Procurement Plan: July 2012 to January 2015

Description of the Contract and Estimated Cost of Acquisition	Estimated Cost (US\$)	Acquisition Methodology <sup>1</sup>	Source of Funding and Percentage		Prequalification (Yes/No)	Estimated Date		Status (Pending, in process, disbursed, canceled)	Comments
			BID	Local / other (in kind)		Publication/ Announcement of Procurement	Termination of Contract		
<b>Component I: Promotion and training</b>									
Consultancy firm (1) or individual consultants	40,000	QBS / NICQ	30,000	10,000	No	Q3 2013	Q3 2014	Pending	
Individual consultant	125,000	NICQ	105,000	20,000	No	Q3 2013	Q3 2015	Pending	
Publications and web site development.	40,000	QBS and PC	20,000	20,000	No	Q4 2013	Q3 2014	Pending	
<b>Logistic</b> Consultation meetings with key stakeholder's (including travels)	120,000	PC	80,000	40,000	No	Q3 2013	Q2 2016	Pending	
<b>Component II: Pilot project preparation</b>									
Consultancy firm or individual consultants (payments to energy service providers approved by ICONTEC to support design of pilot projects for the CO-L1124 program)	160,000	QBS / NICQ	160,000	0	No	Q3 2013	Q1 2015	Pending	

<sup>1</sup> **Goods and Works:** ICB: International competitive bidding; LIB: limited international bidding; NCB: national competitive bidding; PC: price comparison; DC: direct contracting; FA: force account; PSA: Procurement through Specialized Agencies; PA: Procurement Agents; IA: Inspection Agents; PLFI: Procurement in Loans to Financial Intermediaries; BOO/BOT/BOOT: Build, Own, Operate/Build, Operate, Transfer/Build, Own, Operate, Transfer; PBP: Performance-Based Procurement; PLGB: Procurement under Loans Guaranteed by the Bank; PCP: Community participation procurement. **Consulting Firms:** QCBS: Quality- and Cost-Based Selection QBS: Quality-Based Selection FBS: Selection under a Fixed Budget; LCS: Least-Cost Selection; CQS: Selection based on the Consultants' Qualifications; SSS: Single-Source Selection. **Individual Consultants:** NICQ: National Individual Consultant selection based on Qualifications; IICC: International Individual Consultant selection based on Qualifications; CCIN: National Individual Consultant selection based on Comparison of Qualifications.

<b>Logistic</b> Consultation meetings with key stakeholder's (including travels)	40,000	PC	20,000	20,000	No	Q3 2013	Q4 2014	Pending	
<b>Component III: Validation, monitoring and evaluation</b>									
Consultancy firm (validator / certifier - ICONTEC) (1)	220,000	SSS	220,000	0	No	Q3 2013	Q2 2016	Pending	
Registry system to track projects approved in the program and their results	85,000	QBS, PC	75,000	10,000	No	Q3 2013	Q2 2016	Pending	
Individual consultant(s) for overall program evaluation and auditing	40,000	QBS	40,000	0	No	Q1 2016	Q3 2016	Pending	
<b><u>TOTAL</u><sup>2</sup></b>	<b>870,000</b>		<b>750,000</b>	<b>120,000</b>	<b>---</b>	<b>---</b>	<b>---</b>	<b>---</b>	