



REQUEST FOR CEO ENDORSEMENT

PROJECT TYPE: MEDIUM-SIZE PROJECT

TYPE OF TRUST FUND: GEF TRUST FUND

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PART I: PROJECT INFORMATION

Project Title: Securing Energy Efficiency In The Ecuadorian Residential And Public Sectors (SECURE)			
Country(ies):	Ecuador	GEF Project ID: ¹	5114
GEF Agency(ies):	UNDP	GEF Agency Project ID:	5150
Other Executing Partner(s):	Ministry of Electricity and Renewable Energy (MEER)	Submission Date: Re-Submission Date:	March 21, 2014 May 16, 2014
GEF Focal Area (s):	CCM-2	Project Duration(Months)	36 months
Name of Parent Program (if applicable):	n/a	Agency Fee (\$):	168,766
<ul style="list-style-type: none"> ➤ For SFM/REDD+ <input type="checkbox"/> ➤ For SGP <input type="checkbox"/> 			

A. Focal Area Strategy framework²

Focal Area Objectives	Expected FA Outcomes	Expected FA Outputs	Trust Fund	Grant Amount (\$)	Cofinancing (\$)
CCM-2	Appropriate policy, legal and regulatory frameworks adopted and enforced	Energy efficiency policy and regulation in place	GEF TF	1,290,000	2,250,000
	GHG emissions avoided	Energy savings achieved	GEF TF	486,484	23,550,000
Total Project Cost				1,776,484	25,800,000

B. PROJECT FRAMEWORK

Project Objective: To increase the share of energy-efficient electric appliances in the residential and public sectors.						
Project Component	Grant Type	Expected Outcomes	Expected Outputs	Trust Fund	Grant Amount (\$)	Confirmed Cofinancing (\$)
I. Strengthening of the governance and legal framework	TA	1. The governance and legal framework for adopting the use of EE appliances in the public and residential sectors, has been strengthened.	1.1 An enhanced governance structure for energy efficiency policy has been designed and implemented. 1.2 Government staff and public officers (100 persons) are trained on the application of EE standards and practices for the public and residential sector. 1.3 Energy-efficient	GEF-TF	372,000	875,000

¹ Project ID number will be assigned by GEFSEC.

² Refer to the [Focal Area/LDCF/SCCF Results Framework](#) when completing Table A.

			technologies and appliances in the public and residential sectors are receiving financial support through the implementation of one or more NAMAs. 1.4 Technical assistance is provided to increase the competences of the public entities involved with the implementation and enforcement of EE standards (OAE, MEER, SENA, SERCOP).			
II. Technical support to national test laboratories	TA	2. Designated national test laboratories have been prepared to verify compliance of household appliances with applicable EE standards.	2.1 Laboratory facilities (at least 1) of the National Institute for Normalization (INEN) have been upgraded to verify compliance of household appliances with EE standards. 2.2 Technical staff (15 persons) from INEN and other designated laboratories are trained to verify compliance of electric household appliances and lighting with applicable EE standards. 2.3 Work groups (at least 3) within INEN have been strengthened by making available technical staff (4 person-years) and expertise to support development of national EE standards under the baseline program.	GEF TF	780,000	1,100,000
III. Enhancement of the RENOVA refrigerator substitution programme	INV	3. The institutional and technical capacity of the RENOVA programme has been strengthened to ensure the replacement of	3.1 The managerial and technical capacity of the RENOVA Management has been expanded (with 3 person-years),	GEF TF	480,718	23,550,000

		<p>obsolete household refrigerators by energy-efficient units.</p>	<p>including the implementation of an effective MRV system.</p> <p>3.2 Training and technical backstopping is provided (by 1 part-time consultant) to national electricity distribution companies to reach their substitution targets under the RENOVA programme.</p> <p>3.3 The recycling processes for obsolete household refrigerators have been strengthened in collaboration with MIPRO and recycling agents.</p> <p>3.4. Residential customers and public officers have become aware of the benefits and potential of EE appliances through a promotional and educational campaign..</p> <p>3.5 A total of 42,000 EE household refrigerators have been purchased by customers eligible under the RENOVA programme, including the environmentally responsible recycling of obsolete equipment and removal and/or destruction of harmful refrigerants.</p>			
IV. Monitoring & Evaluation	TA	4. The Monitoring & Evaluation plan for the Project has been executed.	<p>4.1 A detailed M&E Plan, including progress indicators and targets, has been agreed upon and is implemented.</p> <p>4.2 The project Terminal Evaluation has been conducted.</p> <p>4.3 The Project has been audited, and lessons learnt have</p>	GEF TF	58,000	25,000

			been collected and disseminated.			
			Subtotal		1,690,718	25,550,000
			Project management Cost (PMC) ³	GF TF	85,766	250,000
			Total project costs		1,776,484	25,800,000

C. SOURCES OF CONFIRMED Cofinancing FOR THE PROJECT BY SOURCE AND BY NAME (\$)

Please include letters confirming cofinancing for the project with this form

Sources of Co-financing	Name of Co-financier (source)	Type of Cofinancing	Cofinancing Amount (\$)
National Government	Ministry of Electricity and Renewable Energy - MEER (RENOVA)	grant	9,660,000
National Government	Ministry of Electricity and Renewable Energy - MEER (RENOVA)	loan	12,927,600
National Government	Ministry of Electricity and Renewable Energy - MEER	In-kind	2,412,400
National Government	Ministry of Industry and Productivity	In-kind	750,000
GEF Agency	UNDP	grant	50,000
Total Co-financing			25,800,000

D. TRUST FUND RESOURCES REQUESTED BY AGENCY, FOCAL AREA AND COUNTRY¹

GEF Agency	Type of Trust Fund	Focal Area	Country Name/ Global	(in \$)		
				Grant Amount (a)	Agency Fee (b) ²	Total c=a+b
UNDP	GEF TF	Climate Change	Ecuador	1,776,484	168,766	1,945,250
Total Grant Resources				1,776,484	168,766	1,945,250

¹ In case of a single focal area, single country, single GEF Agency project, and single trust fund project, no need to provide information for this

table. PMC amount from Table B should be included proportionately to the focal area amount in this table.

² Indicate fees related to this project.

F. CONSULTANTS WORKING FOR TECHNICAL ASSISTANCE COMPONENTS:

Component	Grant Amount (\$)	Cofinancing (\$)	Project Total (\$)
International Consultants	184,000	0	184,000
National/Local Consultants	357,000	150,000	507,000

G. DOES THE PROJECT INCLUDE A “NON-GRANT” INSTRUMENT?

No

PART II: PROJECT JUSTIFICATION

A. DESCRIBE ANY CHANGES IN ALIGNMENT WITH THE PROJECT DESIGN OF THE ORIGINAL PIF⁴

³ PMC should be charged proportionately to focal areas based on focal area project grant amount in Table D below.

A.1 National strategies and plans or reports and assessments under relevant conventions, if applicable, i.e. NAPAS, NBSAPs, national communications, TNAs, NCSA, NIPs, PRSPs, NPFE, Biennial Update Reports, etc.: **NA**

A.2. GEF focal area and/or fund(s) strategies, eligibility criteria and priorities. **NA**

A.3 The GEF Agency's comparative advantage: **NA**

A.4. The baseline project and the problem that it seeks to address:

The baseline project consists of EE policy measures and substitution programmes, such as RENOVA, initiated and implemented by the MEER, and of activities to upgrade national test laboratories under the competence of MIPRO and INEN. These have been updated in the Project Document to reflect the most relevant initiatives and the current development and implementation status. The baseline project aims to: (i) reduce the use of subsidized electricity by residential end-users, thereby saving fiscal expenses; (ii) reduce the share of imported fossil fuels in Ecuador's energy mix; (iii) promote the rational use of energy resources and the electricity infrastructure; and (iv) avoid national greenhouse gas emissions generated by the electricity sector.

The Government of Ecuador is firmly committed to introduce energy-efficient electric appliances in the residential sector. Lower income-families are addressed by replacement programmes, initially for CFL lighting and presently for household refrigerators (RENOVA programme). The RENOVA programme, with a total budget of USD 177,5 million, envisages to replace 330,000 refrigerators. Simultaneously the Government is pushing forward an ambitious programme to design and approve energy-efficiency standards for a broad range of electric devices, drawing upon international standards. Fiscal budget has been assigned by MIPRO for strengthening of the national laboratory infrastructure for testing of industrial and consumer goods - which includes some funding for testing of electric consumer equipment. Investments are also done by the National Institute for Normalization (INEN) to upgrade its electric laboratory. With respect to policy, the Government has issued several decrees and resolutions to ban energy-inefficient lighting and appliances from the market, exhorting public entities to implement only efficient technologies and practices. Notwithstanding the progress so far, the effectiveness of Government-driven baseline activities is hampered by the identified barriers, primarily the incipient technological and human resources basis and weak governance structures for implementing EE policy. Specifically, the baseline project consists of the combined activities in the field of energy efficiency implemented under leadership of the Ministry of Electricity and Renewable Energy (MEER) in collaboration with the Ministry of Industry and Productivity (MIPRO) and its dependent entities INEN and OAE:

- Policy development, resolutions, strategies, and programme development with a focus on EE for the residential and public sectors, under leadership of the MEER as the competent line ministry. The associated cofinancing of US\$ 2,412,400 (in-kind) consists of staff support and facilities, policy development and promotion of energy efficiency across the Government, and to public entities and general public.
- Investment for upgrading the national infrastructure of verification laboratories under the competence of MIPRO. This includes fiscal budget assigned to the National Institute for Normalization (INEN) and laboratories operated by state universities. In-kind cofinancing is provided under the institutional budget of INEN, assigned by MIPRO, for habilitation of its electric laboratory in Conacoto, with an estimated value of US\$ 750,000.
- The refrigerator substitution programme RENOVA, which is implemented by a Project Management hosted by MEER. The associated co-funding consists of USD 22,587,600 (of which USD 9,660,000 subsidy provided by the Government to the beneficiaries, and USD 12,927,600 soft loan to beneficiaries provided by BNF). These funds are used to purchase the envisaged 42,000 energy-efficient refrigerators, including payment of fees and services. This includes the reference cost of processing and final disposal of 42,000 obsolete refrigerators (USD 17 per unit) under supervision of MIPRO.

Synergies exist with the UNIDO programme in Ecuador under the Montreal Protocol, aimed at creating national capacity to manage and decompose national stocks of Ozone-Depleting Substances (ODS). This programme is

⁴ For questions A.1 –A.7 in Part II, if there are no changes since PIF and if not specifically requested in the review sheet at PIF stage, then no need to respond, please enter “NA” after the respective question.

implemented with MIPRO and national industries. The total co-financing budget associated to the baseline project is USD 25,800,000.

- A. 5. Incremental /Additional cost reasoning: describe the incremental (GEF Trust Fund/NPIF) or additional (LDCF/SCCF) activities requested for GEF/LDCF/SCCF/NPIF financing and the associated global environmental benefits (GEF Trust Fund) or associated adaptation benefits (LDCF/SCCF) to be delivered by the project:

The problem statement has been reviewed during the PPG phase, resulting in a better understanding of the market barriers and the rationale behind Government policies. This is reflected in the Project approach by a stronger focus on governance issues and on addressing the current limitations of the laboratory infrastructure and enforcement capabilities. The weak financial stimuli for end-users due subsidized energy tariffs presently impede a market-oriented approach. Therefore, the Government has opted for restrictive policy by demanding minimum energy performance standards, allowing only commercialization of Class A devices. This requirement also holds for equipment delivered under substitution programmes, such as RENOVA for household refrigerators. However, it proves difficult to verify compliance with applicable regulation due to the lack of laboratory infrastructure, specialized certification officers, and effective governance structures. In spite of substantial public investment in laboratories and ICT infrastructure, progress is slower than expected. A similar trend is seen in the RENOVA programme: implementation is behind schedule and processes are not integrated as well as needed. The phase out of incandescent light bulbs has progressed as expected and therefore lighting is no longer included in this project, with the exception of the proposed strengthening of domestic laboratory facilities.

The establishment of an effective system of EE standards involves the Ministry of Electricity and Renewable Energy (MEER) as the competent authority, and the Ministry of Industry and Productivity (MIPRO), which is the incumbent authority for approving national (RTE) standards under the National Quality System. The National Institute for Normalization (INEN) and the Accreditation Organization (OAE) are public entities under MIPRO, responsible for standard development, compliance verification, and for accreditation of test laboratories, respectively. Customs Service (SENAE) relies on OAE to control compliance of imported merchandise with applicable legislation. The PPG confirmed that the governance structures to integrate EE standards into the national Quality System and to enforce compliance of consumer goods sold on the market, are rather weak. GEF assistance can be catalyst to promote more effective coordination between the ministries involved and clarify their mandates.

The RENOVA baseline programme is delivering approx. 19,000 refrigerators during 2013. This is a positive achievement by itself. An internal evaluation by the RENOVA Management (December 2013) highlights a number of operational issues that hamper up scaling to the envisaged delivery rate (of at least 42,000 units per year), including: (i) business skills of the regional electricity distribution companies; (ii) incomplete integration of RENOVA's sub processes causing delay; (iii) lack of capacity to provide technical backstopping; (iv) lack of monitoring tools to supervise the delivery of new refrigerators and the adequate disposal of obsolete units (including tracking of ozone-depleting refrigerants). The GEF Project envisages strengthening the managerial and technical capacity of RENOVA and implementing an adequate Monitoring, Reporting, and Verification (MRV) system to ensure that the envisaged refrigerators, energy savings, and environmental benefits are actually attained.

During the PPG, MEER and UNDP explored the opportunities to strengthen the exit strategy of the SECURE initiative. This has been done by aligning the Project with the national climate change agenda. It is proposed to develop a NAMA targeting EE in the residential sector in collaboration with the Ministry of Environment (MAE). Further, more emphasis is put on obtaining verifiable results, by putting forward the design and implementation of MRV tools to monitor progress under RENOVA and improve accountability. The design of effective MRV tools will be a corner stone for the design and successful implementation of a sector NAMA.

A brief outline of the Project Components and the adjustments compared to the PIF are described below:

Component I. Strengthening of the governance and legal framework. This component remains focused on establishing a conducive governance framework to promote the use of EE appliances by the residential and public sectors. Compared to the PIF, the approach has changed based on the following considerations: (a) The design of new EE policy, regulations and technical standards is strongly Government-driven. In response, the focus is on governance and institutional strengthening of public stakeholders, rather than promotion of market mechanisms; (b) Financial incentives linked to EE standards for end-users are presently not effective. Leveraging investment in

EE is now pursued through a NAMA; (c) Integration of EE standards into public procurement is no longer explicitly put forward, but covered as part of governance. The Project aims to strengthen the capacities of involved institutions, improve inter-institutional communication, and establish a work plan of compliance verification activities with the key stakeholders. It is expected that at Project termination: (i) a more effective governance structure to implement EE policy and regulation will be in place; (ii) the share of non-compliant electric appliances on the market has dropped as a result of more stringent enforcement of EE standards; and (iii) market transformation towards the use of low-emission electric appliances is supported by a sector NAMA under leadership of the MEER and with the MAE support.

Component II. Technical support to national test laboratories. This project component remains targeted at strengthening of the national infrastructure to prepare and implement energy performance standards for electric appliances. Since the Government has instructed INEN to develop EE standards for a broad range of products, this is considered part of the baseline project. The scope of GEF assistance has therefore been redefined, and now specifically addresses the hardware and human resources barriers experienced by INEN and other national laboratories. As such, this component will strengthen INEN's human resource and knowledge base, enabling it to increase the output of new EE standards in line with Government demands. This component will further establish hardware and staff capacities within INEN for EE compliance verification testing. With a view on operational sustainability, this component will further provide TA to enhance the business models adopted by test laboratories. Compared to the PIF, the supportive activities for recycling processes under RENOVA have been moved to Component III.

Component III. Enhancement of the RENOVA refrigerator substitution programme. In alignment with the PIF, this component will support the Government's refrigerator substitution programme RENOVA by addressing the barriers and issues identified. GEF support in the initial phase is deemed critical for enhancing the managerial and technical capacity of the programme and achieving the targets set forth. This Project component aims to improve the business skills of the involved electricity companies by targeted training and technical backstopping. This component will expand the capacity of the RENOVA Management to integrate and speed up the programme. Compared to the PIF, the budget for this component has been reduced as institutional strengthening of MEER is now covered under Component I. This component will further financially support the design and implementation of a system to monitor progress and verify results (MRV) and provide technical assistance to enhance the recycling chain of withdrawn, obsolete refrigerators in coordination with MIPRO. This component further complements promotional activities under the baseline, targeting beneficiaries of RENOVA and the general public.

Component IV. Monitoring & Evaluation. A separate component has been added covering the activities related to project progress monitoring, evaluation according to UNDP and GEF guidelines, and collection of lessons learnt (see Budgeted M&E Plan, section C, for details).

A.6 Risks, including climate change, potential social and environmental risks that might prevent the project objectives from being achieved, and measures that address these risks:

Based on the preliminary risk assessment at PIF stage, the identified risks have been reformulated to clarify cause-effect relations and accordingly structure the proposed mitigation measures. These adjustments also reflect the revised Project approach, involving the risks (1), (2), (4) and (5); see risk matrix Project Document, Annex B. Additional risks have been identified, specifically: (6) changes in the baseline situation affecting the attainment of greenhouse gas emission benefits; (7) sustainability of EE measures in relation to subsidized energy prices; and (8) human resources limitations affecting the sustainable operation of test laboratories and enforcement agencies.

There is a likelihood that actual GHG benefits delivered by the Project will deviate from the estimated value (500-700 kton CO₂e_q) because of the increased share of hydropower in the national generating capacity in the near future. Moreover, the Government is introducing a modal shift in the residential sector (from LPG to electricity) by promoting induction stoves, which will substantially increase electricity consumption. It is therefore suggested to carry out an ex-post evaluation of achieved GHG benefits due to these factors and to account for the assumptions made to estimate market development. This can be carried out as part on the MRV activities under the expected NAMA to be developed for EE.

The lack of transparent energy costs is a systemic barrier for encouraging end-users to purchase efficient appliances and obtain financial benefits. The cost/subsidy barrier is circumvented by the Government by pursuing restrictive policies, effectively aimed at banning energy-inefficient technologies from the market. This requires effective governance structures to be in place. In the future, new hydropower may lower the generating costs of electricity, which would affect the rationale for the Government to encourage the rational use of energy. Hence, there is a risk that EE policies would be discontinued or relaxed. While controlling this risk is beyond the scope and time horizon the Project, strengthening of sector governance and legal framework is expected to contribute to consistent long-term energy policy.

During the PPG, stakeholders acknowledged the need for skilled human resources for sustaining competent technological institutions, including test laboratories, INEN, INER, and national manufacturers of white good appliances. It is not unlikely that skilled staff may be difficult to find and retain under contract. The Project aims to mitigate this risk by concentrating efforts in a few organizations (INEN and MEER, including RENOVA Management), by advocating for long-term employment contracts and fostering the adoption of more sustainable business models for test laboratories.

A.7. Coordination with other relevant GEF financed initiatives

The SECURE Project will be coordinated with the UNIDO/GEF MSP initiative “To promote energy efficiency improvements in the Ecuadorian industry through the development of national energy management standards and application of systems optimization” (GEF ID 4147). Both projects are executed by MEER, with involvement of MIPRO, which should guarantee optimum use of GEF resources.

B. ADDITIONAL INFORMATION NOT ADDRESSED AT PIF STAGE:

B.1 Describe how the stakeholders will be engaged in project implementation.

Stakeholders include: the National Government (MEER, MIPRO, MICSE, MAE), public entities and institutions (including INEN, OAE, SERCOP, SENAE, CONELEC, INER); decentralized autonomous governments and municipalities (GADs); public and private electricity distribution companies; national financing institute BNF; the white good sector association ALBE; national manufacturers of white good equipment (INDUGLOB and ECASA); recycling agents (including ADELCA and SECAP); energy professionals and verification laboratories; the targeted beneficiaries of the RENOVA programme; and the general public as pertaining to the residential sector, including indigenous people, women, and vulnerable groups.

Besides UNDP, as the GEF implementing agency responsible for the adequate spending of GEF funds in line with the Project’s objective and outcomes, the Ministry of Electricity and Renewable Energy (MEER) will be the national executing agency in close coordination with the other ministries (MICSE, MIPRO, and MAE). MIPRO provides co-financing to support to laboratory infrastructure and MAE in the field of NAMA development. The MEER, as the implementing agency of the national, emblematic, substitution programme “RENOVA”, has committed public co-funding for investment in new, energy-efficient household appliances (refrigerators), which is channeled through the national financing institution BNF. The Coordinating Ministry for the Strategic Sectors (MICSE) will be invited to take seat in the Project’s Steering Committee together with MEER, MIPRO, and UNDP.

Under RENOVA, MIPRO provides guidance to national manufacturers (ECASA, INDUGLOB) to ensure adequate product characteristics and compliance with applicable EE standards; it also supervises the recycling process of obsolete units. MIPRO is further the competent authority for the national Quality System, thereto relying on the assigned institutions INEN and OAE. CONELEC, the electricity market authority, and INER, a newly-founded expertise institute assigned to MEER, will act as advisors to the MEER as and if required. The Ministry of Environment will collaborate in the Project by supporting educational and promotional activities under its climate change programme. Moreover, UNDP, MEER and MAE will work together on the design and negotiation of a NAMA instrument targeting EE in the residential sector, an element added to SECURE during the PPG phase.

UNDP will closely interact with the Executing Agency (MEER) for implementing a plan of action to strengthen governance, thereby drawing on its capabilities to link multiple stakeholders at different government levels.

Amendments to the legal framework and institutional mandates, enhanced communication processes, increased awareness by the public sector and the general public, more effective enforcement of energy standards, as well as specific UNDP inputs, are expected to improve governance of energy efficiency as a transversal issue, and to accelerate the envisaged market transformation. Technical and managerial assistance to the RENOVA Management will contribute to articulating project processes in line with the social and environmental safeguards. UNDP will actively seek opportunities to include women, vulnerable groups and indigenous people in the Project by establishing linkages with lower-level authorities (GADs) and seeking synergies with the national system to promote economic development (“Economía Popular y Solidaria”) at grass-roots level.

B.2 Describe the socioeconomic benefits to be delivered by the Project at the national and local levels, including consideration of gender dimensions, and how these will support the achievement of global environment benefits (GEF Trust Fund/NPIF) or adaptation benefits (LDCE/SCCF):

By reducing electricity demand from the lower social strata, the Government saves valuable foreign currency resources since tariffs for this group are subsidized and refined fossil fuels for thermal power generation are imported at international market prices. Energy savings by residential end-users translate into direct savings of fiscal budget. The Government's substitution programmes for CFLs and refrigerators are therefore highly attractive. For reference, the internal rate of return of the RENOVA refrigerator project is 17.4%. At the national level, direct socio-economic benefits will be obtained by fostering economic productivity and competitiveness, which reflects in a reduced energy consumption/GDP ratio. The Project further delivers socio-economic benefits in the electricity sector by promoting system efficiency (from generator to end-user), reducing transmission and distribution losses, and increasing know-how to implement EE measures at end-user's premises. Additional economic benefits are derived from postponing investment decisions in power generation and transmission.

At the level of end-users, the introduction of EE equipment implies significant reductions in energy expenses. Based on the limited socioeconomic data available, the share of refrigerators in residential energy use is 25-30%. The use of more efficient refrigerators would yield cost savings of the order of USD 30-35 per year for an average family. For low-income families, these savings translate into a significant improvement of the household budget. Gender issues have not been identified. The introduction of more efficient and more modern appliances potentially brings along greater comfort for their users, who are predominantly women (in the case of refrigerators and washing machines). Gender issues will expectedly vary according to social stratum. The Project will monitor gender-sensitive issues throughout its implementation and define gender-differentiated progress and impact indicators. A transversal approach to gender and energy will be followed in alignment with OLADE guidelines and recommendations.

Strengthening sector governance implies creating social capital. The Project will strengthen the capacity of (and coordination between) stakeholders, including manufacturers, sales companies, branch and customer organizations, government authorities and regulatory bodies including MEER, MIPRO, OAE and INEN, to increase the value-added per energy unit by the national economy. By strengthening of the national quality system, better products will attain large market shares, thereby increasing user satisfaction and living standards. The increased demand for compliance certification services will expectedly translate into the creation of new, highly skilled jobs in laboratories and with verification agents.

In the context of EE in Ecuador, the sustainability of Project outcomes is enhanced by targeting sector governance and institutional and technical capacities, rather than pursuing stand-alone investment. The government of Ecuador is already putting in place energy efficiency regulations, hence ensuring a long term legal framework supportive of the project. The investment in laboratory facilities supported by the GEF is expected to be sustained as they will be incorporated into the public entities (INEN and OAE), whose position is secured. The co-investment of the Ministry of Production (MIPRO) for the laboratories is a clear sign of the government's commitment to the establishment and appropriation of the facilities. The economic and financial sustainability of the pursued EE measures in the public and residential sectors has been extensively assessed by MEER to justify the allocation of fiscal budget (see section B.3). Likewise, programs such as Renova are schedules to last beyond the lifetime of the project duration. Hence, the project's success in strengthening the program's implementation will strengthen its sustainability and trigger further investment. Lastly, the Project will further advocate for more customer-oriented

business models to serve the incipient market for EE certification, thus providing market based incentives for energy efficiency.

Upscaling and replication is pursued by establishing the institutional and technical infrastructure needed for implementing and enforcing EE standards for electric household appliances. By developing this infrastructure, ensuring that institutions assume their mandates and responsibilities, and developing technical capacities, the project will create an effective platform that will promote energy efficiency in the long term. This will support a market transformation that goes beyond household refrigerators, covering air conditioners, induction stoves, washing machines, and other appliances. The experiences obtained under the RENOVA refrigerator substitution programme will directly benefit future initiatives, specifically for induction stoves. Moreover, capacity strengthening of INEN, OAE, and SENAE is supportive to the enforcement of EE standards in the industry, including the national energy sector.

The Project design exhibits several innovative elements to explore synergies and capitalize on baseline activities, thereby securing the Project's exit strategy. These include:

- i. The design of a NAMA instrument to establish a medium-term policy context for investment in EE measures and for directing technical assistance. NAMAs are a new concept that can be instrumental in mainstreaming climate mitigation concerns into national development processes. Integrating a NAAM framework into the project is an innovative way of promoting the project's sustainability and merging environmental and development concerns in the country. By creating an MRV framework, it also strengthens the compliance with committed benefits (energy savings, GHG emission reductions);
- ii. The Renova program is an innovative scheme to promote energy efficiency in the country. The project is instrumental to ensure its proper implementation, thus demonstrating the effectiveness of this approach and stimulating further public private partnerships in the energy efficiency field.
- iii. The project will, for the first time in Ecuador, support the creation of a strong institutional and technical framework to mainstream energy efficiency into the public and residential sectors. While this approach is tried and tested at a global level, its implementation in Ecuador is still incipient. The project builds upon the Government's commitment to implement energy efficiency to support the establishment of a new institutional framework for this purpose.

B.3. Explain how cost-effectiveness is reflected in the project design:

The Project builds upon government policy to reduce fossil fuel imports and cut associated public expenditures, for which the rational use of energy and the introduction of energy-efficient electric equipment by the residential and public sectors are key instruments. To this extent, a growing number of energy efficiency standards is being designed and approved. Simultaneously, massive substitution programmes for efficient lighting and household refrigerators (RENOVA) are implemented to address low-income households, thereby saving energy and expenditures for beneficiaries and the State.

The intervention area and approach chosen for the Project, is based on an assessment of alternative energy efficiency measures carried out by MEER. Out of 32 measures 13 are prioritized, attaining 91% of the total energy saving potential in the residential sector, public sector (schools and hospitals), and the industry. Of these, the residential sector makes up almost 90% of energy savings, and associated reductions of greenhouse gas emissions. Please refer to the data in the following table and to the study by Villacís, pp. 106-108 (see Prodoc Annex A).

Impact of 13 Prioritized EE Measures in Ecuador (source: EE Plan MEER)				
Sector	Total energy Savings (ton oil equiv.)	CO2 emission reductions (ton CO2)	Total investment country level (USD x 1,000)	Economic savings (USD x 1,000)

Industry	240,036	718,921	994,478	237,480
Public schools	84,124	648,321	549,219	54,162
Public hospitals	221,497	687,752	810,788	188,404
Residential	1,481,606	16,645,579	6,733,834	1,868,656
Total	2,027,263	18,700,573	9,088,319	2,348,702

The cost-effectiveness of the RENOVA substitution programme was assessed by MEER to its approval by the Government, as detailed in the project profile (see Prodoc Annex A). This is described in the Project Document, p.12, first paragraph).

From the perspective of national climate change policy, the potential for voluntary emission reductions in several economic sectors, including the energy sector, is explored by developing NAMA programmes. Further, fiscal resources are allocated to strengthening of the laboratory infrastructure to verify compliance of electric equipment with EE standards. The Project has been designed to articulate and enhance these –ongoing- processes and programmes, which is instrumental for strengthening governance structures in a context where skilled human capital is scarce. By providing technical assistance to create human capital, it aims to add value to the investments in laboratory infrastructure and hardware funded by the Government. Direct investment of GEF resources in hardware is limited to INEN, for which it implies strengthening of its institutional mandate. The Project will further strengthen MEER’s management and technical capacity to attain the necessary impetus for mainstreaming EE across the Government. A similar approach is followed with respect to the management of the RENOVA programme. By speeding up the delivery rate of the programme fresh capital is mobilized from end-users to purchase EE refrigerators, generating additional energy savings and greenhouse gas emission reductions. It is stressed that, while leveraging co-funding resources to an amount of approx. USD 23 million for investment in EE refrigerators, no GEF resources are directly used to support procurement.

The cost-effectiveness of the Project is approx. US\$ 4.0 per ton CO₂_{eq} considering the direct and direct post-project emission reductions (700 kton CO₂_{eq}). Compared to the PIF, the final Project design covers the development and application of effective tools for Measurement, Reporting and Verification of results. The Project will further advocate the execution of an ex-post evaluation of attained energy savings and GHG benefits, which is deemed instrumental to close project cycles under RENOVA and stimulate the actors involved to meet the quantitative targets set forth. This approach is well aligned with the principles of the NAMA instrument, and is therefore an important part of the Project’s exit strategy.

C. DESCRIBE THE BUDGETED M & E PLAN: The Monitoring and Evaluation Plan is summarized in the following table (see also Project Document, p. 42).

	Type of M&E activity	Responsible Parties	Budget US\$ <i>Excluding project team staff time</i>	Time frame
Output 4.1	Inception Workshop and Report	<ul style="list-style-type: none"> • Project Manager • MEER • UNDP CO, UNDP GEF 	US\$ 5,000 (GEF) US\$ 5,000 (GOE)	Within first two months of project start up
	Measurement of Means of	<ul style="list-style-type: none"> ▪ UNDP GEF RTA/Project Manager will oversee the hiring of specific 	To be finalized in Inception	Start, mid and end of project (during

	Verification of project results.	studies and institutions, and delegate responsibilities to relevant team members.	Phase and Workshop.	evaluation cycle) and annually when required.
	Measurement of Means of Verification for Project Progress on <i>output and implementation</i>	<ul style="list-style-type: none"> ▪ Oversight by Project Manager ▪ Project team 	To be determined as part of the Annual Work Plan's preparation.	Annually prior to ARR/PIR and to the definition of annual work plans
	ARR/PIR	<ul style="list-style-type: none"> ▪ Project Manager and team ▪ MEER ▪ UNDP CO ▪ UNDP RTA ▪ UNDP EEG 	None	Annually
	Periodic status/ progress reports	<ul style="list-style-type: none"> ▪ Project Manager and team 	None	Quarterly
	Monitoring & Evaluation expert backstopping	<ul style="list-style-type: none"> ▪ Project Manager and team ▪ UNDP CO ▪ UNDP RCU ▪ MEER ▪ External Consultants (i.e. evaluation team) 	US\$ 15,000 (GEF) US\$ 7,500 (GOE)	Stocktaking mission in Project Year 2.
Output 4.2	Terminal Evaluation	<ul style="list-style-type: none"> ▪ Project Manager and team, ▪ UNDP CO ▪ UNDP RCU ▪ MEER ▪ External Consultants (i.e. evaluation team) 	US\$ 30,000 (GEF) US\$ 7,500 (GOE)	At least three months before the end of project implementation
	Project Terminal Report	<ul style="list-style-type: none"> ▪ Project Manager and team ▪ UNDP CO ▪ MEER ▪ local consultant 	US\$ 0	At least three months before the end of the project
Output 4.3	Audit	<ul style="list-style-type: none"> • UNDP CO • Project Manager and team • MEER 	US\$ 3,000	Yearly
	Visits to field sites	<ul style="list-style-type: none"> • UNDP CO • UNDP RCU (as appropriate) • Government representatives 	For GEF supported projects, paid from IA fees and operational budget	Yearly
	Dissemination of lessons learnt	<ul style="list-style-type: none"> • Project Manager and team • Local consultant 	US\$ 5,000 (GEF) US\$ 5,000 (GOE)	At least three months before the end of the project

	<p>TOTAL indicative COST</p> <p>Excluding project team staff time and UNDP staff and travel expenses</p>	<p>Total: US\$ 83,000 (GEF: US\$ 50,500, excluding US\$ 7,500 travel expenses; GOE: US\$ 25,000)</p>	
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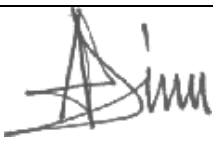
PART III: APPROVAL/ENDORSEMENT BY GEF OPERATIONAL FOCAL POINT(S) AND GEF AGENCY(IES)

A. RECORD OF ENDORSEMENT OF GEF OPERATIONAL FOCAL POINT(S) ON BEHALF OF THE GOVERNMENT(S): (Please attach the [Operational Focal Point endorsement letter\(s\)](#) with this form. For SGP, use this [OFP endorsement letter](#)).

NAME	POSITION	MINISTRY	DATE (MM/dd/yyyy)
Marcela Aguiñaga Vallejo	Minister of Environment	Ministry of Environment	08/27/2012

B. GEF AGENCY(IES) CERTIFICATION

This request has been prepared in accordance with GEF/LDCF/SCCF/NPIF policies and procedures and meets the GEF/LDCF/SCCF/NPIF criteria for CEO endorsement/approval of project.

Agency Coordinator, Agency Name	Signature	Date	Project Contact Person	Telephone	Email Address
Adriana Dinu UNDP-GEF Executive Coordinator and Director a.i.		May 16, 2014	Oliver Page Regional Technical Advisor EITT	(507)302- 4548	oliver.page@undp.org

ANNEX A: PROJECT RESULTS FRAMEWORK (as presented in the Project Document, p. 31).

This project will contribute to achieving the following Country Programme Outcome as defined in CPAP or CPD: Outcome 2: CPAP Direct Outcome 5: Expected output 5.1: SENPLADES and MEER, and their functionaries, private and community stakeholders and private sector count with greater skills, tools and technology, to plan, formulate, implement and manage efficient projects of traditional and alternative energy generation, with renewable resources that allow to promote the energy development of the country.

Country Programme Outcome Indicators: CP Component: Sustainable and Equitable Management of the Environment: Authorities and other entities endowed with greater aptitudes to formulate adaptation/mitigation responses before climate change, and for developing renewable energy sources and promote energy efficiency.

Primary applicable Key Environment and Sustainable Development Key Result Area (same as that on the cover page, circle one): 1. Mainstreaming environment and energy

Applicable GEF Strategic Objective and Program: GEF-CCM 2. Promote market transformation for energy efficiency in industry and the building sector

Applicable GEF Expected Outcomes: (2.1) Appropriate policy, legal and regulatory frameworks adopted and enforced; (2.3) GHG emissions avoided

Applicable GEF Outcome Indicators:(2.1) Extent to which EE policies and regulations are adopted and enforced; (2.3) Tons of CO2 equivalent

Strategy	Indicators	Baseline	Target (End of Project)	Sources of verification	Assumptions
Project Objective: To increase the share of energy-efficient electric appliances in the residential and public sectors.	Number of households participating in RENOVA programme (hh/year)	Approx. 19,000 households per year	42,000 households per year	Official documents from RENOVA/MEER; terminal evaluation	
	Extent of change in energy efficiency coverage by users and specific sectors	0 MWh reduced as result of project	Extent of change in energy efficiency coverage by users and specific sectors	0 MWh reduced as result of project	

		Number of laboratories accredited by OAE (for EE compliance verification of household appliances)	No laboratory fully habilitated for EE(0).	At least one (1) laboratory fully habilitated	Project reports, visual inspection, official documents, independent verification.	
		NAMA on EE for residential sector	No NAMA (0)	NAMA on EE for residential sector designed and approved (1)	Project reports, official documents	
Outcome 1⁵: The governance and legal framework for adopting the use of EE appliances in the public and residential sectors, has been strengthened.	1.1 An enhanced governance structure for energy efficiency policy has been designed and implemented.	(a) EE committees in line ministries in place; (b) Number of sector plans or policies covering EE issues.	Decrees in place. (a) No committees (0); (b) None (0)	(a) EE committees operational in at least four (4) ministries and three (3) municipalities; (b) EE included in at least three (3) sector plans or policies.	Official publications, project reports	Sustained government commitment to strengthen policy framework and sector governance; Effective communication between ministries
	1.2 Government staff and public officers (100 persons) are trained on the application of EE standards and practices for the public and residential sector.	(a) Number of public officers trained; (b) Number of entities involved.	(a) 0 people; (b) 0 entities	(a) 100 people; (b) 10 entities	Project reports, interviews	Sustained government commitment to strengthen policy framework and sector governance
	1.3 Energy-efficient technologies and	NAMA on EE for residential sector	No NAMA (0)	NAMA on EE for residential sector	Official publications, project reports	Sustained government commitment to strengthen

	appliances in the public and residential sectors are receiving financial support through the implementation of one or more NAMAs.			designed and approved (1)		policy framework and sector governance
	1.4 Technical assistance is provided to increase the competences of the public entities involved with the implementation and enforcement of EE standards.	enforcement plans and protocols in place	No (0) plans in place	One or more plans designed and implemented	Official reports, resolutions, work plans; project reports	Sustained government commitment to strengthen policy framework and sector governance; Effective communication between stakeholders
Outcome 2: Designated national test laboratories have been prepared to verify compliance of household appliances with applicable EE standards.	2.1 Laboratory facilities (at least 1) of the National Institute for Normalization (INEN) have been upgraded to verify compliance of household appliances with EE standards.	Number of laboratories habilitated for EE compliance verification of household appliances.	No (0) laboratories fully habilitated.	At least one (1) laboratory fully habilitated.	Project reports, visual inspection, official documents, independent verification.	Appropriate equipment is successfully procured; Laboratories have genuine interest to be accredited in EE; Supporting baseline activities are effectively implemented..
	2.2 Technical staff (15 persons) from INEN and other designated laboratories have become trained to verify compliance of electric household appliances and lighting with applicable EE standards.	(a) Number of laboratory staff and energy professionals duly trained; (b) Number of laboratory staff certified to perform EE compliance verification tests;	(a) No trained laboratory staff (0); (b) No certified staff (0); (c) No laboratories with skilled staff (0).	(a) fifteen (15) people; (b) nine (9) staff; (c) at least one (1) laboratory.	Qualification certificates of trained staff, project reports, project evaluations	Laboratories have genuine interest to be accredited in EE; Project activities can be implemented according to plan.

		(c) Number of designated laboratories with skilled staff.				
	2.3 Work groups (at least 3) within INEN have been strengthened by making available technical staff (4 person-years) and expertise to support development of national EE standards under the baseline program.	(a) staff hired by Project (person-years); (b) staff continued after Project Termination; (c) number of workgroups on EE standards for household appliances.	(a) 0 person-years; (b) 0 people; (c) 0 workgroups	(a) 4 person-years; (b) at least one (1) person; (c) at least three (3) workgroups	Project reports, minutes of work groups; contracts of staff hired by INEN	Sustained government commitment to develop EE standards and provide institutional support to INEN; Project activities can be implemented according to plan.
Outcome 3: The institutional and technical capacity of the RENOVA programme has been strengthened to ensure the replacement of obsolete household refrigerators by energy-efficient units.	3.1 The managerial and technical capacity of the RENOVA Management has been expanded (with 3 person-years), including the implementation of an effective MRV system.	(a) staff hired for RENOVA Management (person-years); (b) software-based MRV tool designed, procured and implemented	(a) no staff hired (0); (b) no MRV tool (0)	(a) one consultant hired (3 person-years); (b) MRV tool implemented (1)	Project reports; official reports from MEER/ RENOVA; contracts of staff hired by MEER; field visits, independent evaluation	Sustained government commitment to RENOVA; Project activities can be implemented according to plan.
	3.2 Training and technical backstopping are provided (by 1 part-time consultant) to national electricity distribution companies to reach their substitution targets under	(a) increased substitution rate RENOVA programme by least-performing electricity companies	(a) continuation of baseline performance ⁶ ; (b) electricity companies not actively seeking	(a) at least 20% improvement of least-performing companies compared to baseline (refr/years); (b) ten	Project reports; official reports from MEER/ RENOVA; independent evaluation	Sustained government commitment to RENOVA; Effective communication with electricity distribution companies

⁶ As defined in RENOVA preliminary Evaluation, January 2014.

the RENOVA programme.	(replaced refrigerators per year); (b) number of electricity companies recurring to technical backstopping	support (0)	(10) companies seeking regular support to improve business		
3.3 The recycling processes for obsolete household refrigerators have been strengthened in collaboration with MIPRO and recycling agents.	(a) recycling capacity for household refrigerators; (b) percentage of ODS refrigerant recovered and/or destroyed.	(a) recycling capacity approx. 20,000 units; (b) estimated below 50 (%)	(a) recycling capacity for at least 60,000 units per year; (b) contracts with two (2) companies; (c) at least 95% of ODS recovered.	Project reports, official documents, independent verification	Project activities can be implemented as planned; Selected private companies have sustained interested to deliver environmental services.
3.4 Residential customers and public officers have become aware of the benefits and potential of EE appliances through a promotional and educational campaign.	Awareness raising campaign on EE by MEER, MIPRO and MAE.	No campaign (0)	Campaign designed and implemented (1)	Project reports, interviews and surveys; ex-post evaluation	Project activities can be implemented as planned;
3.5 A total of 42,000 EE household refrigerators have been purchased by customers eligible under the RENOVA programme, including the environmentally responsible recycling of obsolete equipment and removal and/or	(a) Number of households participating in RENOVA programme (hh/year); (b) Number of obsolete units retired from the	(a) Approx. 18,000 households per year; (b) 18,000 (estimated)	(a) 42,000 households/year; (b) 42,000 units.	Official documents from RENOVA/MEER; terminal evaluation	Sustained government commitment to RENOVA; Project activities can be implemented according to plan.

	destruction of harmful refrigerants.	market				
Outcome 4: The Monitoring & Evaluation plan for the Project has been executed.	4.1 A detailed M&E Plan, including progress indicators and targets, has been agreed upon and is implemented.	(a) Inception workshop; (b) Annual progress monitoring reports	(a) No inception workshop held (0); (b) No progress reports.	(a) Inception workshop held (1); (b) Progress monitored and reported annually (3).	Project reports, inception reports.	Sector stakeholders show sustained commitment to the objectives of the Project; Envisaged activities can be executed as planned
	4.2 The project Terminal Evaluation has been conducted.	Evaluation Report	No evaluation report (0)	Terminal Evaluation report completed (1)	evaluation report	Envisaged activities can be executed as planned.
	4.3 The Project has been audited, and lessons learnt have been collected and disseminated.	Report with lessons learnt	No report (0)	Report with lessons learnt (1)	project report, terminal evaluation	Envisaged activities can be executed as planned.

ANNEX B: RESPONSES TO PROJECT REVIEWS (from GEF Secretariat and GEF Agencies, and Responses to Comments from Council at work program inclusion and the Convention Secretariat and STAP at PIF).

Comments	Response	Reference in documents
Comments from the GEF Council		
No Comments Received		
Comments from the GEF Secretariat		
<p>(16. Is there a clear description of: a) the socio-economic benefits, including gender dimensions, to be delivered by the project, and b) how will the delivery of such benefits support the achievement of incremental/additional benefits?)</p> <p>Partially yes. It is acceptable that the agency describe these issues in more detail in CEO Endorsement.</p>	<p>Socio-economic benefits and gender dimensions are indicated in the Project Document. However, it must be stressed that updated energy end-use data will become available from 2014 onwards. The Project will closely follow up on new information about the relation between energy services and quality of life among households in Ecuador with a view on attaining the most impact possible. Gender issues have been reviewed as part of UNDP's Social and Environmental Safeguard process. Gender aspects will be monitored on a yearly basis and corrective action will be taken if required; additional gains for vulnerable groups and women will be pursued if possible.</p>	<p>Project Document, p. 27-28; Annex G</p>
<p>(30. Is PIF clearance/approval being recommended?)</p> <p>1) At CEO endorsement, we expect a detailed description of the system for collection and destruction of ODS from old appliances. However, the GHG benefits from destruction should not be counted in the global emissions benefit analysis.</p> <p>2) At CEO endorsement, please document coordination with regional and global efforts on standards and labeling for refrigerators and appliances, such as the efforts in Andean countries, in Mexico, the SEAD initiative, and efforts by CLASP. The lessons learned from the on-going Mexico refrigerator</p>	<p>1) The ODS collection and destruction system is described in Annex E of the Project Document. Only GHG benefits derived from energy savings are accounted by the SECURE initiative.</p> <p>2) The PPG pointed at the issue that the market drivers behind EE equipment in Ecuador differ greatly from most other countries in the region, including Mexico. Energy costs for end-users in Ecuador are relatively low, making price differentiation according to energy class less effective. Therefore, Ecuador pursues a restrictive policy, aimed at imposing minimum energy performance standards for a range of equipment (effectively banning non-Class "A" equipment from the market).</p> <p>Besides this aspect, Mexico can be a guiding example with respect to the implementation of energy performance standards, EE labels, compliance verification, and training of professionals in the delivery chain. Ecuador's key organizations for quality control (OAE and INEN) are members of regional and international associations of peer organizations and increasingly operate in a global context.</p>	<p>Project Document, Annex E</p>

replacement program could be very useful.		
Comments from STAP		
No Comments Received		
Comments from GEF SEC at CEO Endorsement		

ANNEX C: STATUS OF IMPLEMENTATION OF PROJECT PREPARATION ACTIVITIES AND THE USE OF FUNDS⁷

A. DESCRIBE FINDINGS THAT MIGHT AFFECT THE PROJECT DESIGN OR ANY CONCERNS ON PROJECT IMPLEMENTATION, IF ANY:

N/A

B. PROVIDE DETAILED FUNDING AMOUNT OF THE PPG ACTIVITIES FINANCING STATUS IN THE TABLE BELOW:

PPG Grant Approved at PIF: US\$ 50,000 (GEF)			
<i>Project Preparation Activities Implemented</i>	<i>GEF/LDCF/SCCF/NPIF Amount (\$)</i>		
	<i>Budgeted Amount</i>	<i>Amount Spent To date</i>	<i>Amount Committed</i>
1. Baseline analysis of EE market in Ecuador, including the identification and analysis of the barriers and gaps.	15,000	15,000	
2. Project log frame (goal, objective, outcomes, outputs, activities, including indicators, means of verification and critical assumptions)	5,000	5,000	
3. Recommendations on how to integrate enhanced Renova project investment activities into the proposed GEF project.	10,000	10,000	
4. Analysis and recommendations on the incorporation of Montreal Protocol concepts into the project strategy	5,000	5,000	
5. Report presenting all the proposed project activities (baseline and incremental) including budgets (GEF and co-financing); and report on the estimated energy savings and CO2 emission reductions attributable to the proposed project.	10,000	10,000	
6. Agreed stakeholder consultation plan, project management and implementation arrangements; letters of Co-financing.	5,000	5,000	
7. Tracking Tool, UNDP Project Document, and CEO Endorsement Request.	0		
Total	50,000	50,000	0

⁷ If at CEO Endorsement, the PPG activities have not been completed and there is a balance of unspent fund, Agencies can continue undertake the activities up to one year of project start. No later than one year from start of project implementation, Agencies should report this table to the GEF Secretariat on the completion of PPG activities and the amount spent for the activities.

ANNEX D: CALENDAR OF EXPECTED REFLOWS (if non-grant instrument is used)

Provide a calendar of expected reflows to the GEF/LDCF/SCCF/NPIF Trust Fund or to your Agency (and/or revolving fund that will be set up)

No reflows to the GEF Trust Fund are foreseen under this Project