



GEF-6 GEF SECRETARIAT REVIEW FOR FULL-SIZED/MEDIUM-SIZED PROJECTS THE GEF/LDCF/SCCF TRUST FUND

GEF ID:	9612		
Country/Region:	Mauritius		
Project Title:	Realising Energy Savings and Climate Benefits of Implementing Mandatory Energy Auditing in Coordination with HCFC Phase-out and HFC Avoidance		
GEF Agency:	UNDP	GEF Agency Project ID:	5509 (UNDP)
Type of Trust Fund:	GEF Trust Fund	GEF Focal Area (s):	Climate Change
GEF-6 Focal Area/ LDCF/SCCF Objective (s):		CCM-1 Program 1;	
Anticipated Financing PPG:	\$130,000	Project Grant:	\$4,532,164
Co-financing:	\$17,870,000	Total Project Cost:	\$22,402,164
PIF Approval:		Council Approval/Expected:	
CEO Endorsement/Approval		Expected Project Start Date:	
Program Manager:	Ogawa Masako	Agency Contact Person:	Robert Kelly

PIF Review			
Review Criteria	Questions	Secretariat Comment	Agency Response
Project Consistency	1. Is the project aligned with the relevant GEF strategic objectives and results framework? ¹	MO August 1, 2016 The proposed project is aligned with the CCM-1 Program 1. Mauritius signed and ratified the Paris Agreement in April 2016 (page 21). However, because Mauritius receives funding from the Multilateral Fund, it is not eligible for CW2 Program 5. Please delete the funding request from Program 5.	The funding request from CW2, Programme 5 has been removed.

¹ For BD projects: has the project explicitly articulated which Aichi Target(s) the project will help achieve and are SMART indicators identified, that will be used to track the project's contribution toward achieving the Aichi Target(s)?

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Review Criteria	Questions	Secretariat Comment	Agency Response
		MO August 15, 2016 Comment cleared.	
	2. Is the project consistent with the recipient country's national strategies and plans or reports and assessments under relevant conventions?	<p>MO August 1, 2016 The project is consistent with the policies including the Long-term Energy Strategy of Mauritius, 2009-2025.</p> <p>(1) Please include the following information in the PIF.</p> <p>a) Does the applying country have an INDC?</p> <p>b) When was the INDC submitted to the UNFCCC?</p> <p>c) Has the country provided an indication that the INDC will be used as is for its first NDC, or is it expected that the INDC will be updated before submittal?</p> <p>d) How does the project propose to align with and contribute to implementation of the INDC. Please document how project activities align with specific priorities, measures or policies in the INDC, or if the INDC is at a general level, please describe alignment using both the INDC and other national policies.</p> <p>MO August 15, 2016 Information are provided. Comments cleared.</p>	<p>a) Mauritius does have an INDC.</p> <p>b) The INDC was submitted on 28 September 2015.</p> <p>c) Following the signing and ratification of the Paris Agreement on 22 April 2016, as per paragraph 22 of 1/CP.21-Adoption of the Paris Agreement, the INDC is now considered to be the first Nationally Determined Contribution for Mauritius.</p> <p>d) As mentioned in the INDC, Mauritius is working towards mitigating its emissions and implementing adaptation actions. However, the proposed adaptation and mitigation activities can only be implemented in the medium- and long-term with necessary support from international funding agencies, grants from climate funds, transfer of appropriate and affordable adaptation and mitigation technologies, technical assistance and capacity development. Specifically, for the proposed GEF project the following two priorities listed in the INDC report are relevant namely:</p> <ul style="list-style-type: none"> • Efficient use of energy through the deployment of appropriate technologies in all sectors of the economy and awareness raising on energy conservation; • Leapfrogging to low global warming potential refrigerants. <p>It may further be noted that the Action</p>

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			<p>Plan for the INDC, approved by the Government of Mauritius in March 2016, specifically refers to the need for efficient use of energy through the deployment of appropriate technologies in all sectors of the economy, including an eco-friendly manufacturing sector, and awareness raising on energy conservation. The goal in terms of energy efficiency is to achieve 10% gains as compared to the BAU by 2025.</p> <p>The project is also in line with the Energy Action Plan update of 2014 , which refers specifically to energy efficiency for industrial processes.</p>
Project Design	3. Does the PIF sufficiently indicate the drivers ² of global environmental degradation, issues of sustainability, market transformation, scaling, and innovation?	<p>MO August 1, 2016 The proposed project will develop and implement the tools such as energy audit, ESCO, financial scheme, and ISO 50001 certification, which are innovative initiatives and can expect sustainability and scaling. (1) The PIF does not discuss problems, root causes and barriers that need to be addressed. Please strengthen the PIF to include these information.</p> <p>MO August 15, 2016 The PIF is revised. Comment cleared.</p>	<p>The PIF has been strengthened to highlight specific problems, root causes and barriers. The following text is now included in the PIF:</p> <p>Mauritius continues to have a weak institutional framework for the promotion of energy efficiency management systems, and Mauritian firms are poorly sensitized to the benefits of adopting energy efficiency technologies. Furthermore, there remain specific barriers in the manufacturing sector which limit effective energy management.</p> <p>The principal root causes of poor energy</p>

² Need not apply to LDCF/SCCF projects.

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			<p>efficiency culture and barriers to improving energy efficiency are technical, institutional and financial. There is a lack of technical capacity to analyze/audit energy efficiency and propose the appropriate interventions and investments to improve it; there is a weak institutional framework for promoting, enforcing and monitoring energy efficiency; and there are insufficient credit lines to support enterprises willing to invest in energy efficiency projects. Furthermore, the powerful synergies between industrial energy efficiency actions in the RAC sector and the Government's complementary efforts to phase-out HCFCs under the Montreal Protocol are completely neglected in the baseline.</p> <p>The rationale of the GEF project is to assist EEMO to operationalize the planned national mandatory energy audit scheme for large energy consumers by addressing and removing technical, institutional and financial barriers to the adoption of energy efficiency measures and, at the same time, capitalize on the synergies in the RAC sector around ODS emissions reductions and HFC avoidance</p> <p>A key enabler will be the development of a transparent and explicit roadmap for the national roll-out of the mandatory energy audit scheme, based on national</p>

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			<p>stakeholder consultations and engagement. Without such a roadmap, the innovative legislation is unlikely to succeed in its objectives, as the private sector will see only the imposed costs and administrative burdens of the initiative and not the longer-term benefits.</p> <p>Whilst energy performance standards for stand-alone equipment are relatively straightforward to define, based on existing international standards, it is more difficult, or at least more complicated, to define standards for systems with multiple components and variable operating conditions and applications. A minimum level of energy savings will be achieved by developing and implementing national mandatory minimum energy performance standards for selected appliances, equipment and, more importantly, 'systems' in addition to the appliances currently listed in the Energy Act</p> <p>The current electricity tariff structure does not incentivize energy efficiency for some of the larger consumers on the industrial tariff. The modification of the current tariff structures represents a potent mechanism to incentivize industrial operators to invest in energy efficiency actions. Given the alignment of CEB's interests (a loss-making tariff on the industrial sector) with those of EEMO (to</p>

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			promote energy efficiency investments), there is considerable potential for revision of the electricity tariff structure to reinforce other energy efficiency incentives.
	4. Is the project designed with sound incremental reasoning?	<p>MO August 1, 2016 (1) Please provide incremental reasoning. The PIF does not have a section on incremental reasoning.</p> <p>MO August 15, 2016 Comment cleared.</p>	<p>The project's incremental approach can be summarised as follows:</p> <p>The Government of Mauritius has clearly identified the importance of promoting energy efficiency in industry into key policy, regulatory and institutional frameworks and across key sectors. However, despite this strong policy commitment, the integration of energy efficiency in industry is not happening at the required pace as systemic and institutional barriers still remain to achieving the required changes, despite the urgency of the intertwined issues of climate change mitigation through improved energy management and the modernization of specific industrial processes to use less energy and less GWP-intensive chemicals.</p> <p>In the baseline situation, the barriers and insufficient capacity for implementing energy efficiency measures means that a business-as-usual scenario would promote continued slow implementation of measures already identified in the TNA and SNC among the various sectors and stakeholders that manage or influence</p>

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			<p>what is currently happening in industry. As a result, the implementation of energy efficiency in industry is likely to continue with an ad hoc approach, based on voluntary actions and with little sustainability, with the target of 10% mentioned in the INDC unlikely to be achieved.</p> <p>In the alternative scenario enabled by the GEF, systemic and institutional barriers to implementing energy efficiency in industry will be removed at the national, and local levels, backed by incentives for the implementation of actions identified through the energy audits. The integration of energy efficiency considerations into the various programmes and projects described in the baseline analysis will help to improve energy management in industry, thereby strengthening the national economy and local livelihoods, and generating global environmental benefits. The equipment to be funded through the project, the stakeholder capacity development and the local-level integrated energy management through well-defined management systems will help to ensure that interventions produce the intended results in terms of energy efficiency. Addressing knowledge gaps, strengthening capacity for more holistic energy management, and promoting inter-sectoral coordination and policy</p>

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			harmonisation should be considered to be a major contribution to the implementation of activities in the context of the Energy Action Plan up to 2025.
	5. Are the components in Table B sound and sufficiently clear and appropriate to achieve project objectives and the GEBs?	<p>MO August 1, 2016</p> <p>Overall project structure</p> <p>(1) The components are structured not by the prioritized and integrated themes but by the baseline projects and donors. For example, both component 2 and 3 have financial arrangements, and the energy audit scheme (component 1) and the national certification scheme for ISO 50001 (component 3) do not explain their coordination. Please review the overall structure of the project and provide more integrated components/activities.</p> <p>Component 1</p> <p>(2) Please re-structure the activities which focus on two major targets, namely (i) boilers and refrigeration and air-conditioning (RAC) system, and (ii) energy efficiency in all industrial and commercial sectors. Also please explain how these activities will be implemented in integrated manner.</p> <p>(3) Please clarify what activities will be implemented based on the study of output 1.7.</p>	<p>(1) The PIF text has been improved and clarified to address the reviewer's comments. The components are not, and are not intended to be, structured according to baseline projects and donors. Rather, the component structure is aligned with barriers, and the components are designed to inter-lock in a coordinated manner.</p> <p>Component 1 seeks to support the operationalization of the national EE audit programme, specifically by developing an implementation roadmap agreed to by all stakeholders, and by linking the EE programme to the Government's parallel efforts under the HPMP. Component 2 strengthens the EE programme's engagement with RAC and steam systems due to their central importance in EE efforts (see response below). Component 3 addresses the financing barrier confronting the EE programme by developing a dedicated credit line for firms. Component 4 establishes the quality standards (ISO 50001 and related ISO standards) that will underlie the EE programme, as well as the ability of national stakeholders to apply and certify these standards. And Component 5 seeks</p>

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		<p>Component 5 (7) Please explain why this component is required. The components 1 - 4 will target both large enterprises and SMEs, and it is difficult to see that the case study of large consumers are relevant for SMEs.</p> <p>MO August 15, 2017 The project structure and activities are streamlined. Comments cleared.</p>	<p>to diffuse the benefits from the EE programme more broadly across the manufacturing sector.</p> <p>The project leverages a number of stakeholders, initiatives and financial mechanisms, as a well-designed GEF project should. But the components are structured in a logical and coordinated fashion that will serve to unlock the promised mitigation benefits. The text has been clarified in the PIF to make this clearer to the reader.</p> <p>(2) There are not two targets, and we thank the reviewer for identifying the lack of clarity in the PIF. RAC and boilers (i.e. steam systems) are significant sources of energy consumption among the largest energy consumers (sites) in Mauritius, spanning sub-sectors as diverse as textiles, chemicals, manufacturing, hotels and retail (supermarkets). The two issues of energy efficiency in all large industrial and commercial consumers and the efficiency of their boilers and RAC systems are, in fact, the same issue. Boilers and RAC have been highlighted by EEMO as priority EE targets for that very reason. They are also complicated systems that need specialist technical knowledge to assess and recommend interventions for.</p>

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			<p>The text in the PIF has been amended to remove the ambiguity.</p> <p>(3) There is considerable potential for revision of the electricity tariff structure to reinforce other energy efficiency incentives. A technical study will be undertaken in conjunction with the Central Electricity Board (CEB) to explore the potential for tariff revision, and this will feed into the current plan “currently under implementation by the Government” to establish an independent electricity sector regulator with the power to set tariff rates.</p> <p>There is typically little incentive for an electricity utility to promote EE among end-users, as it represents a loss of revenue. However, the situation in Mauritius is different: because of Government-imposed tariffs, the utility loses money when supplying electricity to the industrial sector (the tariff is set below the utility's cost of generation). The GEF project will harness the support of CEB to propose rational tariff amendments that will serve both to improve the financial status of CEB (a parastatal) and to incentivize industrial consumers to invest in EE measures. Such tariffs will receive a positive reception in the current political climate, characterized by strained Government finances (and therefore</p>

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			<p>limited ability to keep propping up CEB) and the move to an independent electricity regulator with tariff-setting powers.</p> <p>(7) Case-studies of interventions carried out by large energy consumers will be compiled and edited to make them relevant and accessible for smaller consumers. Such studies or guides might pertain to only a particular process or technology, rather than a whole site or sector, but can serve to initiate interest in the availability and benefits of energy efficiency across a large group of stakeholders, including smaller consumers.</p> <p>While large consumers are initially easier to target from an EE perspective, and represent 'low-hanging fruit' in that context, the importance of the SME sector should not be disregarded. SMEs account for 45% of employment and 35% of energy consumption in Mauritius: they are an important element of the climate change mitigation equation in Mauritius. While the GEF project will not have SMEs as its focus, it will ensure that learning is transferred to this important sector to ensure indirect mitigation benefits are maximized.</p>
	6. Are socio-economic aspects, including relevant gender elements, indigenous people, and CSOs	MO August 1, 2016 (1) Please explain if CSOs are considered as stakeholders.	The United Nations Conference on Environment and Development (UNCED) definition of a CSO is a non-

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	considered?	MO August 15, 2016 Comment cleared.	<p>governmental, not-for-profit organization that represents different major groups (Agenda 21, Chapter 23). This term includes various and diverse types of organizations, including NGOs, farmers, women, the scientific and technological community, youth and children, indigenous peoples and their communities, business and industry, workers and trade unions and local authorities</p> <p>Following this definition, CSOs are definitely stakeholders in the proposed GEF project. Details are provided on page 16, Table 2. Key CSO stakeholders include:</p> <ul style="list-style-type: none"> • Universit�� des Mascareignes - The Universit�� des Mascareignes houses the Faculty of Sustainable Development and Engineering, within which the main departments for tertiary education in refrigeration and air-conditioning and renewable energy are located. It is the beneficiary, through the HPMP, of advanced training equipment for the use of CO2 in refrigeration systems, and is a key stakeholder in the development of academic and vocational training courses in refrigeration and air-conditioning as well as the development of operational codes of practice for industry and R&D in the field of

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			<p>application of natural refrigerants. It will be a key contributor during the PPG stage to the design of proposal development of energy audit specialists and the potential synergies between RAC service practice and energy management.</p> <ul style="list-style-type: none"> • Business Mauritius “ Business Mauritius (formerly the Joint Economic Council, JEC) is a not-for-profit organisation that represents the business interests of the commercial sector in discussions with the Government. Business Mauritius is the coordinating body of the National Energy Efficiency Programme (NEEP) and has experience in implementing energy audits with private sector entities in Mauritius, in collaboration with AFD and UNEP in the context of concessional loans for EE investments. It will be involved in the PPG stage as the key representative of the private sector investors and potential project beneficiaries, particularly in relation to the proposed design of the roll-out plan for the regulations and the details of the credit line and associated mechanisms for implementation of recommended energy efficiency interventions. <p>Other industry associations and interested parties “ such as the Mauritius Industry Export Association and the Rotary Club</p>

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			(which operates an EE programme) “ will, of course, be consulted at the PPG stage and full details will be provided in the CEO Endorsement Request.
Availability of Resources	7. Is the proposed Grant (including the Agency fee) within the resources available from (mark all that apply):		
	<ul style="list-style-type: none"> The STAR allocation? 	<p>MO August 1, 2016 Yes. The available CCM STAR allocation is \$5,105,070. The project requests \$5,105,000 for CCM focal area.</p> <p>MO August 15, 2016 The projects requests \$5,105,070. The OFP letter for endorsement is provided.</p>	
	<ul style="list-style-type: none"> The focal area allocation? 	<p>MO August 1, 2016 Yes. The project requests \$251,850 for CW focal area.</p> <p>MO August 15, 2016 The funding request is removed.</p>	
	<ul style="list-style-type: none"> The LDCF under the principle of equitable access 		
	<ul style="list-style-type: none"> The SCCF (Adaptation or Technology Transfer)? 		
	<ul style="list-style-type: none"> Focal area set-aside? 		
Recommendations	8. Is the PIF being recommended for clearance and PPG (if additional amount beyond the norm) justified?	<p>MO August 1, 2016 Not at this time. Please address the comments in box 1 - 6.</p>	

PIF Review			
Review Criteria	Questions	Secretariat Comment	Agency Response
		MO August 15, 2016 All comments cleared. Program Manager recommends CEO PIF clearance.	
Review Date	Review	August 01, 2016	
	Additional Review (as necessary)	August 15, 2016	
	Additional Review (as necessary)		

CEO endorsement Review			
Review Criteria	Questions	Secretariat Comment at CEO Endorsement	Response to Secretariat comments
Project Design and Financing	1. If there are any changes from that presented in the PIF, have justifications been provided?		
	2. Is the project structure/ design appropriate to achieve the expected outcomes and outputs?		
	3. Is the financing adequate and does the project demonstrate a cost-effective approach to meet the project objective?		
	4. Does the project take into account potential major risks, including the consequences of		

CEO endorsement Review			
Review Criteria	Questions	Secretariat Comment at CEO Endorsement	Response to Secretariat comments
	climate change, and describes sufficient risk response measures? (e.g., measures to enhance climate resilience)		
	5. Is co-financing confirmed and evidence provided?		
	6. Are relevant tracking tools completed?		
	7. <i>Only for Non-Grant Instrument:</i> Has a reflow calendar been presented?		
	8. Is the project coordinated with other related initiatives and national/regional plans in the country or in the region?		
	9. Does the project include a budgeted M&E Plan that monitors and measures results with indicators and targets?		
	10. Does the project have descriptions of a knowledge management plan?		
Agency Responses	11. Has the Agency adequately responded to comments at the PIF ³ stage from:		
	• GEFSEC		
	• STAP		
	• GEF Council		
	• Convention Secretariat		
	12. Is CEO endorsement		

³ If it is a child project under a program, assess if the components of the child project align with the program criteria set for selection of child projects.

CEO endorsement Review

Review Criteria	Questions	Secretariat Comment at CEO Endorsement	Response to Secretariat comments
Recommendation	recommended?		
Review Date	Review		
	Additional Review (as necessary)		
	Additional Review (as necessary)		