



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

GEF ID:	9056		
Country/Region:	Burundi		
Project Title:	Promotion of Small Hydro Power (SHP) for Productive Use and Energy Services		
GEF Agency:	UNIDO	GEF Agency Project ID:	
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:	\$0	Project Grant:	\$2,638,060
Co-financing:	\$10,660,000	Total Project Cost:	\$13,298,060
PIF Approval:		Council Approval/Expected:	June 01, 2015
CEO Endorsement/Approval		Expected Project Start Date:	
Program Manager:	Ming Yang	Agency Contact Person:	Josy Thomas

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?	MY 3/13/2015 Yes. This project is aligned with Program 1 of GEF 6 Strategic Objective CCM-1: Promote the timely development, demonstration, and financing of low-carbon technologies and mitigation options.	
	2. Is the project consistent with the recipient country's national strategies and plans or reports and assessments under relevant conventions?	MY 3/13/2015 Not completed at this time.	3/26/2015: Suggestion is well taken. The proposed project is in line with the

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		<p>Issues addressed: The project is consistent with the National Strategy for Development of Renewable Energy in Burundi until 2025 that was published in 2012.</p> <p>Issues not addressed: Burundi's Second National Communication under the United Nations Framework Convention on Climate Change was completed in June 2010. Please justify the consistence of this project with the country's Second National Communication.</p> <p>MY 3/26/2015: Yes, comments cleared.</p>	<p>National Strategy attached as Annex 4 to Burundi's Second National Communication to the United Nations Framework Convention on Climate Change (UNFCCC), which was completed in June 2010. The strategy is meant to develop hydro power stations every ten years and. The Second National Communication identified strengthening of hydropower capacity as well as developing micro-hydro power plants as priority projects under mitigation measure in chapter six of the communication. The proposed project aims to scale up of small hydro power generation for rural electrification and productive uses in small and medium sized industries whereby mitigating GHG emissions from energy. The above statement is included in Section 6 on page no. 16 of the revised PIF document.</p>
Project Design	<p>3. Does the PIF sufficiently indicate the drivers¹ of global environmental degradation, issues of sustainability, market transformation, scaling, and innovation?</p>	<p>MY 3/13/2015</p> <p>Not at this time.</p> <p>The PIF presents some background information on the country's energy sector. But it does not address the drivers of global environmental degradation, or specifically the gap of</p>	<p>3/26/2015: a) Civil conflict in the 1990s had prevented the development of the country's electricity generation infrastructure. Small hydropower development has been consequently affected. It was planned that investments will be done in new hydropower plants every ten year, but no such investment</p>

¹ Need not apply to LDCF/SCCF projects.

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		<p>small hydro power investments in the country. The PIF only discussed one possible driver of causes, namely, inadequate technical and management skills in the energy sector. Is that all? Are there any other drivers that caused the severe constraints in meeting the country's energy demand by using small hydro power resources?</p> <p>Sustainability: Will the six demo small hydro power plants generate electricity with costs that are competitive in the future market when the project implementation is over? How will the fanatical scheme run sustainably after the project implementation is over? Please justify it in the Section of Sustainability on page 12.</p> <p>Market transformation: Below the sub-section of Scaling-up, please write one paragraph on how this project will help transform the country's energy market.</p> <p>MY 3/26/2015: Yes, comments cleared.</p>	<p>was made over the last decades. Apart from technical management, the complex nature of the energy sector further hinders the growth of rural electrification and in turn the small hydropower development. Overlapping responsibilities between ministries such as the Ministry of Energy and Mines, the Ministry of Communal Development and the Ministry of Development Planning and Finance (which is responsible for investment planning and coordination with foreign donors), slows down the growth of small hydropower plants . Fiscal barriers to small hydropower development consist of lack of incentive for foreign investments and high transportation costs for equipment based on the ports of Kenya and the United Republic of Tanzania. One of the major constraints is the lack of small hydropower surveys and data availability as a basis for implementation . Burundi's energy sector is currently under-developed, which means that there are considerable opportunities for investors. Burundi's hydro electrical production costs are among the lowest in the region. According to the World Bank, the average estimated production cost for most of the hydropower plants was approximately 0.04 USD/kWh, for thermal power plant it was 0.3 USD/kWh and 0.48 USD/kWh for diesel</p>

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			<p>generators in 2012. The average production costs for the energy mix are consequently estimated at 0.062 USD/kWh for 2012 .</p> <p>The above is included in paragraphs 4, 5 and 6 of sub section Baseline scenario on page no. 6 of the revised PIF document. Though Burundi is a least developed country, for which the indication of drivers for global environmental indicators, etc. are not applicable (refer footnote 1 of this document). We have tried to identify the drivers of global environmental degradation, issues of sustainability, market transformation, scaling, and innovation for the project conveniences as much as possible.</p> <p>b) Yes. The demo sites will be chosen only based on the detailed feasibility studies and bankable document that includes a financial analysis to determine the profitability of the project. The financial scheme will be operated by a financial institution in Burundi and the proposed 4 million USD for the scheme will be sourced from the stakeholders. Such that the financial scheme will be running even after the completion of project implementation. Interested investors can access the scheme to develop the replication projects. The above statement is included paragraph 3 of sub section sustainability</p>

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			<p>on page no. 12 of the revised PIF document.</p> <p>c) A country's energy market and its industrial growth are interdependent. In this regard, as of now, growth of Burundi industries is severely hampered due to the lack of electricity. Decentralized hydropower generation will lower the production cost and reduce the dependence of diesel. The mini-grids are the promising option for the developing power infrastructure. Given the interest of international development partners in the renewable energy sector, and thanks to an improving business climate, actors who are interested in the energy sector will have a unique opportunity to invest. . The above statement is included paragraph 2 of sub section scaling up on page no. 13 of the revised PIF document.</p>
	<p>4. Is the project designed with sound incremental reasoning?</p>	<p>MY 3/13/2015 Not at this time.</p> <p>On page 12, the PIF reads: "The established SHP plants will result in the avoidance of approximately 189,232 t CO₂e emissions directly throughout their lifetime of 20 years (Foot note 18). It is expected that the induction of market transformation in which many others will also initiate and develop SHP projects of at least 5.1 MW</p>	<p>3/26/2015:</p> <p>The comments are well taken and the load factor assumption has been revised. 45% load factor has been assumed now and the calculations are revised accordingly.</p> <p>"The established SHP plants will result in the avoidance of approximately 107,222 tCO₂e emissions directly throughout their lifetime of 20 years. It is expected that the induction of market transformation in which many others</p>

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		<p>within a time span of maximum ten years after the project. This will lead to the avoidance of 567,696 t CO₂e emissions indirectly. "</p> <p>Foot note 18: Assuming a plant load factor of 95% and a diesel generator emission factor of 0.8 t CO₂e.</p> <p>The above assumption is not correct. Any hydro power plants in the world cannot run 8,322 hours per year (at a plant load factor of 95%). Please revise the load factor, justify the assumptions, and present details of calculations.</p> <p>MY 3/26/2015: Yes, comments cleared.</p>	<p>will also initiate and develop SHP projects of at least 5.1 MW within a time span of maximum ten years after the project. This will lead to the avoidance of 160,834 tCO₂e emissions indirectly. "</p> <p>The above statement is included in paragraph 1 of sub section Global environmental benefits on page 12 of the revised PIF document.</p>
	5. Are the components in Table B sound and sufficiently clear and appropriate to achieve project objectives and the GEBs?	<p>MY 3/13/2015 Yes, it looks OK.</p>	
	6. Are socio-economic aspects, including relevant gender elements, indigenous people, and CSOs considered?	<p>MY 3/13/2015 Yes.</p>	
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>MY 3/13/2015</p> <p>Yes. As of 3/12/2015, Burundi had a budget of \$6.27 million in STAR.</p>	
	<ul style="list-style-type: none"> The focal area allocation? 	<p>MY 3/13/2015: Yes. As of 3/12/2015, Burundi had a</p>	

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		budget of \$3.0 million in the climate change focal area.	
	<ul style="list-style-type: none"> The LDCF under the principle of equitable access 	MY 3/13/2015 N/A	
	<ul style="list-style-type: none"> The SCCF (Adaptation or Technology Transfer)? 	MY 3/13/2015 N/A	
	<ul style="list-style-type: none"> Focal area set-aside? 	MY 3/13/2015 N/A	
Recommendations	8. Is the PIF being recommended for clearance and PPG (if additional amount beyond the norm) justified?	<p>MY 3/13/2015 Not at this time.</p> <p>Please address the comments in Boxes: 2, 3, and 4.</p> <p>MY 3/26/2015: Yes, all comments were cleared.</p> <p>One more thing to be considered please. The amount of direct GHG emission reductions shown in Table F is different from that in the section of Global Environment Benefit on page 12. Please revise the number in Table F to make these figures consistent when submitting the CEO ER document.</p>	3/26/2015: The comments 2, 3, and 4 have been addressed accordingly.
Review Date	Review	March 13, 2015	March 26, 2015
	Additional Review (as necessary)	March 26, 2015	
	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 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?		

CEO endorsement Review

Review Criteria	Questions	Secretariat Comment at CEO Endorsement	Response to Secretariat comments
	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 ² stage from:		
	• GEFSEC		
	• STAP		
	• GEF Council		
	• Convention Secretariat		
Recommendation	12. Is CEO endorsement recommended?		
Review Date	Review		
	Additional Review (as necessary)		
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² 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.