



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

GEF ID:	9251		
Country/Region:	Samoa		
Project Title:	Improving the Performance and Reliability of RE Power Systems in Samoa (IMPRESS)		
GEF Agency:	UNDP	GEF Agency Project ID:	5669 (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:	\$150,000	Project Grant:	\$6,075,828
Co-financing:	\$46,489,200	Total Project Cost:	\$52,715,028
PIF Approval:	September 14, 2015	Council Approval/Expected:	October 21, 2015
CEO Endorsement/Approval		Expected Project Start Date:	
Program Manager:	Masako Ogawa	Agency Contact Person:	Manuel L. Soriano

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	<p>MO August 6, 2015</p> <p>The project proposes to align with GEF-6, CCM Objective 1, Program 1 and 2.</p> <p>The project activities align well with CCM Program 1, which includes policies needed to promote demonstration, deployment, and financing.</p> <p>However, they do not align well with</p>	The PIF has been revised to reflect project alignment with CCM: Program 1.

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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		<p>Program 2. In order to qualify for Program 2, project activities must be designed for "Supporting the design of innovative policy packages addressing climate mitigation concerns and socio-economic consequences." Or "Demonstrating a performance-based mechanism linked to emission reductions" or "Supporting measures to de-risk low-emission investments." More information can be found in the GEF-6 Programming Directions document (GEF/A.5/07/Rev.01, May 22, 2014), pages 63-64.</p> <p>Please revise Table A to indicate alignment with CCM Program 1.</p> <p>MO August 13 2015 Comment cleared.</p>	
	2. Is the project consistent with the recipient country's national strategies and plans or reports and assessments under relevant conventions?	<p>MO August 6, 2015 Yes, Samoa has the target to reduce growth rate in the volume of imported fossil fuels by 10% by 2016, and to introduce 100% renewable power in the electricity sector by 2017.</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 6, 2015 Yes. Samoa uses renewable energy (RE), but its share has decreased since 2001 because of the lack of coherent</p>	

² Need not apply to LDCF/SCCF projects.

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		<p>national energy policy. It also concerns the stability of electricity system when various renewable energy have been developed and integrated in the system.</p> <p>The proposed project will develop policies and provide technical and financial support so that the energy system will be improved. Biomass is relatively minor resource in the SIDS, but this project will provide good example of the use of this resource.</p>	
	4. Is the project designed with sound incremental reasoning?	<p>MO August 6, 2015</p> <p>Yes. The project will enhance integrated energy planning and facilitation of investment in both RE and energy efficiency.</p>	
	5. Are the components in Table B sound and sufficiently clear and appropriate to achieve project objectives and the GEBs?	<p>MO August 6, 2015</p> <p>Please explain what technology envisaged for non-power RE-application (e.g. cooking).</p> <p>Component 3 and 4 overlap the beneficiaries of finance (e.g. RE users) and provider of finance (e.g. local bank). Please explain why two components are separated, and please consider to merger these components if appropriate.</p> <p>The study on social impact of RE of</p>	<p>At this project concept stage, the envisaged technologies include biogas generation for cooking/heating; direct biomass combustion (e.g., improved cook stoves); biomass gasification for cooking in residences and process heating in industrial applications. The final lineup of non-power RE technologies will be proposed during the project development stage.</p> <p>Not really sure about the comment. Components 3 and 4 are distinct from each other in the sense that the former is addressing the high cost of RET</p>

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		<p>component 4 would be better included in the component 1 to support policy development. Please revise.</p> <p>On knowledge management, there are many bio-energy projects implemented. Even though they are not necessarily in SIDS, please use experiences and lessons learnt in these projects.</p> <p>MO August 13 2015 Comments cleared.</p>	<p>applications in power generation in Samoa, while the latter will address the market barriers that could potentially impact on the sustainability of the RE development and utilization efforts of the country and set back achievements in realizing the country's target 100% RE electricity production. Whereas the improved availability of, and access to, financing for projects on electricity savings, non-power RE-application and electricity system performance improvement is one of the expected outcomes of Component 3, the increased demand and utilization of RE-generated electricity for income/revenue generation activities and social services in the country is the expected outcome of Component 4. Component 3 is also expected to make possible the financing of projects on electricity saving and power system performance enhancement by the Government of Samoa and private sector. In that regard, the original proposed output of established financing schemes for productive and social uses of RE electricity in Component 4 has been merged with the proposed TA outputs in Component 3. Component 3 will cater to both the financing institutions (capacity building, design and establishment of financing schemes), the energy end-users who will benefit from the financing schemes, and</p>

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			<p>indirectly the local engineering services providers that have the capacity to implement EE/RE technology application projects, including RE-based power generation. Component 4 will cater to energy end-users as well as to the private sector entities that are interested in upstream and downstream businesses that support EE/RE technology applications or make use of RE electricity for productive and social uses.</p> <p>Agree. The suggested output has been moved to Component 1, as well as the output: approved and enforced policies and IRRs in supporting the financing of projects on the productive and social uses of RE electricity.</p> <p>Part II, Sec. 7 has been revised to include uptake of lessons learned and best practices on bio-energy project design, installation and operation from other countries such as those in Asia, and where available from other SIDS. The results from the applications that will be carried out under the project will also be shared to other PICs and SIDS.</p>
	6. Are socio-economic aspects, including relevant gender elements, indigenous people, and CSOs considered?	MO August 6, 2015 Yes.	
	7. Is the proposed Grant (including the Agency fee) within the resources		
Availability of Resources			

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	available from (mark all that apply):		
	<ul style="list-style-type: none"> The STAR allocation? 	<p>Mo August 6, 2015 The total amount of STAR allocation for Samoa is \$6,817,289, but the proposed project requested \$6,819,999 (project cost \$6,078,310 + agency fee \$577,439 + PPG \$150,000 + agency fee \$14,250). Please revise the amount. Also, please include Table D to show the requested fund and agency fee.</p> <p>MO August 13 2015 Comments cleared</p>	<p>Based on the GEFSec's PMIS, the exact total GEF-6 STAR allocation of Samoa is US\$ 6,817,282. In this regard, the project costs have been revised as follows:</p> <ul style="list-style-type: none"> Total project components cost = US\$ 5,786,503 Project management cost = US\$ 289,325 Total project cost = US\$ 6,075,828 PPG request amount = US\$ 150,000 Agency Fee = US\$ 591,454 (Fee for FSP = US\$ 577,204; Fee for PPG = US\$ 14,250) Total cost = US\$ 6,817,282 <p>Per GEFSec advice, the country's GEF OFP letter of endorsement that states a total cost of US\$ 6.82 million need not be changed.</p>
	<ul style="list-style-type: none"> The focal area allocation? 	NA	
	<ul style="list-style-type: none"> The LDCF under the principle of equitable access 	NA	
	<ul style="list-style-type: none"> The SCCF (Adaptation or Technology Transfer)? 	NA	
	<ul style="list-style-type: none"> Focal area set-aside? 	NA	
Recommendations	8. Is the PIF being recommended for clearance and PPG (if additional amount beyond the norm) justified?	<p>MO August 6, 2015 Not at this time. Please address comments in box 5 and 7.</p>	

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		<p>MO August 13 2015 All comments are cleared. The program manager recommends CEO PIF clearance.</p> <p>MO September 17, 2015 During PPG, please estimate direct and indirect GHG emission reduction. The references for Calculating GHG Benefits of GEF Projects are available in Tracking tool.</p>	
Review Date	Review	August 06, 2015	
	Additional Review (as necessary)		
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Project Design and Financing	1. If there are any changes from that presented in the PIF, have justifications been provided?	<p>MO April 12, 2017 (1) Please address the following errors; PIF output 2.3.3 on capacity development of EPC personnel will</p>	<p>PIF output 2.3.3 The original Output 2.3.3 in the GEF-approved PIF is "Completed capacity building for EPC personnel in the optimum load dispatch of system power generation units for achieving</p>

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		<p>be implemented through Activity 2.1.4.2, not Output 5.1; PIF output 2.3.2 on replication plan will be implemented through Output 2.3.4, not 2.3.3; PIF output 5.3 will be implemented through Activity 1.2.3, not in under Output 5.3; PIF output 5.4 is designated as Output 2.1.2, but this Output 2.1.2 does not have capacity development related activities; PIF output 5.5 expected to develop follow-up program. Please explain how this program will be developed in the project; and PIF output 5.7 will be implemented through Output 2.2.5, not Output 2.1.2, as 2.1.2 does not have monitoring and evaluation activities. (2) Please provide justification of new output 5.1 for schools and universities. (3) Component 2 title is "RE-based power system", but it also has output and activities on non-power. Please revise the title accordingly at this endorsement stage.</p> <p>MO June 6, 2017 Comments cleared.</p>	<p>overall least generation cost". The key subject here is "optimum load dispatch". The capacity development on optimum load dispatch for EPC is included in Output 2.3.4. To make this clear, optimum load dispatch has been clearly stated in Activity 2.1.4.2 as among the subjects to be covered in the capacity development program for EPC. The original Output 5.1 "Completed promotional workshops to disseminate information on sustainable RE technology applications in communities, and to enhance awareness and knowledge on the productive and social uses of RE electricity" is now "Completed capacity development on RET (design, engineering, financing, construction, operation and maintenance) for schools and universities", which includes Activity 5.1.1 on capacity development on RE and DSM/EE technologies and on optimum power dispatch will be designed together with the EPC as a follow-up program for capacity development of the energy sector in the optimum load dispatch to ensure stability of the power systems. The capacity development program will be "designed together with EPC" and is not for EPC.</p> <p>PIF output 2.3.2 Agree. The original Output 2.3.2 in the GEF-approved PIF is "Documented technology replication plans for minimizing/abating potential system instability in the other EPC systems". Output 2.3.2 is now re-stated as "Operational demonstrations of power system</p>

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			<p>stabilization technologies in the EPC power grid system". The original Output 2.3.2 is now an enhanced output and designated as Output 2.3.4: Approved plans for the replication and/or scale up of the demos on minimizing or abating potential system instability in the EPC power grid system.</p> <p>PIF output 5.3 The original Output 5.3 in the GEF-approved PIF is "Completed capacity development for national and local government authorities on the planning and utilization of sustainable biomass energy resources in support of socio-economic development of Samoan communities." This has been merged with the original PIF Outputs 5.1 and 5.2 and replaced by the output statement "Completed promotional activities of communities, entrepreneurs, institutions and local government authorities on RE and DSM/EE technologies, applications and policy planning", but still designated as Output 5.3 in the Project Document.</p> <p>Activity 1.2.3 is on the development and implementation of a comprehensive training program for relevant agencies and responsible personnel in national energy development, planning and implementation. One of the activities (Activity 5.3.2) to deliver Output 5.3, is the development and implementation of awareness and training workshops on RE, DSM/EE and PURE/SURE for communities and local authorities. While the former focuses</p>

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			<p>on aspects such as national energy balance assessment, energy planning at the national level, national electricity development and infrastructure planning, etc., the latter focuses more on aspects of enhanced energy access (power and non-power applications) and energy planning at the local level. Inasmuch as the latter capacity development interventions are in line with the delivery of completed promotional activities of communities, entrepreneurs, institutions and local government authorities on RE and DSM/EE technologies, applications and policy planning, this is under Output 5.3.</p> <p>PIF output 5.4 Thanks for pointing this out. The original Output 5.4 in the GEF-approved PIF is "Completed and fully evaluated program for the promotion and capacity building on RE-based system design, engineering, financing, construction, operation and maintenance." This has been merged with the new Output 5.1.</p> <p>PIF output 5.5 Since the original Output 5.5 in the GEF-approved PIF has been merged to Output 5.1, the development of the follow-up program is expected to be done under Activities 5.1.1 and 5.1.4. To make this clear, Activity 5.1.5 has been included to emphasize the development of the sustainable follow-up plan for the development and implementation of the RE/EE technology capacity development program.</p>

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			<p>PIF output 5.7 Thanks for pointing this out. The original Output 5.7 in the GEF-approved PIF is "Enhanced RE resource supply and consumption monitoring and reporting system in the country." This will now be delivered through Activity 1.1.3, which among others will also involve the design of a framework for monitoring and reporting RE resource supply and consumption in Samoa. Furthermore, the One Stop Shop website that will be developed in Activity 1.1.4 will also be designed to support monitoring and reporting of RE resource supply and consumption in Samoa. Output 2.2.5 (Documented operating and energy performances of demonstrations) will definitely contribute also to achievement of an enhanced RE resource supply and consumption monitoring and reporting system in Samoa. Output 2.1.2 will contribute information on the biomass energy resource in the country.</p> <p>(2) The main service providers for capacity development in technical and vocational skills and knowledge are the vocational schools and universities, particularly the National University of Samoa (NUS) and the Samoa campus of the University of the South Pacific (USP). The planned technical capacity building on RE/EE technologies will build on the ongoing activities of these schools in these areas and other related areas. The NUS has</p>

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			<p>existing research program on renewable energy applications, and the USP has an existing Vocational Training Centre in Samoa that can provide the necessary training on the operation and maintenance of equipment used in RE-based energy systems. The planned capacity development program under IMPRESS will be institutionalized through NUS and USP. There is an ongoing region-wide program on capacity development on sustainable energy, in which Samoa is a participant. The capacity development program under IMPRESS can also build on this. This is the PacTVET (Pacific Technical and Vocational Education and Training) program. Apart from this, the Samoa Qualifications Authority (SQA), and the Ministry of Education, Sports and Culture (MESC) have ongoing programs on the development of knowhow and skills that are useful in RE and EE technology applications in the country. For the school level, supplementary learning units for the existing science subjects can be further developed focusing on basic knowledge of RE and DSM/EE technologies.</p> <p>(3) The title has been changed to RE-based Energy System Improvements.</p>
	2. Is the project structure/ design appropriate to achieve the expected outcomes and outputs?	<p>MO April 12, 2017</p> <p>(1) Please clearly define productive use of RE and social use of RE.</p> <p>(2) Output 1.3; Please explain if the project will review EPC Act 1980</p>	<p>(1) Productive uses of renewable energy (PURE) refer to production activities that make use of RE as energy source (e.g., food processing activities that make use of RE for food</p>

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		<p>and Electricity Act 2010 to identify barriers which hinder enhancement of DSM and energy efficiency.</p> <p>(3) Output 1,1 and 1.4: It is not clear why output 1.4 will assess only technology. Assessment of RE technology (1.4.1) can be implemented under output 1.1 to support policy development. Incentives can be designed based on the law and policies from output 1.1, as well as based on the assessment of financial conditions, business environment etc. of RE industry. Please consider relevant assessment for each output.</p> <p>(4) Component 1, 2 and 4: There are many assessment, review and evaluation on RE. Please explain and strengthen the coordination and complementarity among activities/outputs such as 1.1.2, 2.1.2.1, 2.1.2.2, 2.1.2.3, 2.1.2.5, 4.1 and 4.2 on biomass resources and their users, and 1.4.1 and 2.1.3.1 on technologies.</p> <p>(5) Component 1 to 5: There are many capacity building, assistance, promotional program, training and awareness raising activities. Please explain how these activities will be coordinated and conducted efficiently.</p> <p>(6) Component 2 and 4: Component</p>	<p>production like solar dryers and heaters, wood-fired ovens, and RE-based electricity generation units). Social uses of renewable energy (SURE) refer to activities that make use of RE as energy source for the delivery of social services (e.g., water supply using solar PV water pumps, solar PV powered telecommunications, etc.).</p> <p>(2) The review of both Acts will be carried out under Activity 1.1.1. This is mainly to determine available and appropriate options applicable under existing and upcoming regulatory frameworks in Samoa to establish effective process to promote integration of RE IPPs into EPC's grids. The potential for issues (if any) concerning the implementation of DSM/EE initiatives in regards the enhanced IPP involvement in RE-based power generation in Samoa will be further verified and confirmed during the implementation of Component 1 activities. In the case of DSM/EE regulations, this will be covered by the activities that will deliver Output 1.3: Formulated and approved EE implementation regulations to promote EE.</p> <p>(3) Activity 1.4.1 is on the conduct of cost and benefit analysis of applicable RETs at the national and community levels. It is one of the activities that will help deliver formulated and approved policy measures to incentivize</p>

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		<p>2 will develop business model for biomass resources production. Please explain if this result will be used in component 4, so that whole supply chain business model will become environmentally sustainable.</p> <p>(7) Component 3; According to detail activities, it is understood that Outcome 3.1 will operationalize financial schemes by Financial Institutions (FIs), and Outcome 3.2 will support FIs to follow the government requirements. Also outputs under both outcomes will target RE, DSM and EE and their potential beneficiaries. However targets of outcomes look different (3.1 for DSM, power/non-power RE, and 3.2 for EE and use of RE). Paragraph 137 mentions Activity 3.5.1.5, but it should be 3.1.1.5 on follow up plan. Please reorganize the outcomes, outputs and activities so that the project will successfully operationalize financial schemes.</p> <p>(8) Component 3 and 4: Activity 3.1.2.2, 3.1.3.2, 3.2.2.1 as well as 4.3.1 and 4.3.2 will support beneficiaries. Please explain how these activities will be coordinated.</p> <p>(9) Component 2: Page 13 and 17 discusses that solar and wind powers have caused system instability. Page 154 provides power</p>	<p>communities and private sector for RE production (Output 1.4). Obviously, the relevant results of the activities that will deliver Output 1.4, can also be used in the policy making activities to deliver Output 1.1. For ease of activities implementation, the technology assessments and policy making will be carried out independently by separate entities. The results of the assessments will then be used as inputs for coming up with the policies and policy measures and instruments to incentivize communities and the private sector in utilizing RE for energy production.</p> <p>(4)</p> <p>The complementarities of the activities that were pointed out are recognized, and the coordination arrangements for the implementation of these activities have already been further elaborated in the revised Project Document. These are summarized in Annex 1 of this document.</p> <p>(5)</p> <p>For this rather very broad comment, the following response describes examples how the project was designed in such a way that these generic technical assistance activities are set-up to ensure coordinated, efficient, cost-effective and synergistic implementation. Most of the capacity building (inclusive of training), provision of assistance, promotional program, and awareness raising activities go hand-in-hand. These can also be carried out in</p>

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		<p>system performance demonstration, but it is not clear if this demonstration or demonstration under Component 2 will address the issue discussed in page 13 and 17. Please clarify if demonstration will address the issue.</p> <p>(10) Component 1 (activity 1.1.4): Please explain why this service will not be established in the government. Also please explain what is the authority of the Project Management Unit to provide advice on permission and licensing. Please consider to operationalize this scheme within the government not after the project but during the project so that government will gain enough experiences and capacity to continue after the project.</p> <p>(11) Project Result Framework (page 83-85): Outcome 2.2 has indicator of "Number of RE based power", but the project will focus on biomass based RE. Please explain if this indicator will cover all RE. This outcome will also target non-power. Please explain how impact on non-power will be followed-up.</p> <p>(12) Project Result Framework (page 83-85): Component 5 has a indicator on public authorities, but they will be trained not through component 5 but through component 1. Please revise</p>	<p>parallel or in conjunction with each other particularly if the target stakeholders and beneficiaries are the same. Capacity building can be specific to a particular subject matter and to a specific set of stakeholders/beneficiaries. For that matter coordination efforts by the PMO will involve liaising with the specific stakeholder/beneficiary and with the experts who will design and carry out the capacity building program. For example, capacity building on the enhancement of electricity system stability and energy performance, will be specific for EPC personnel (Activity 2.1.4.2), and therefore will involve the liaising with them and the trainers in the design, organization, conduct and evaluation of the capacity building on that particular subject. The capacity building can also be a program on a specific subject but intended for more than one set of stakeholders/beneficiaries, and in that case there would be more coordination work to be done to design, organize, conduct and evaluate such program. For example, capacity building on the financing of RE and DSM/EE projects including those on PURE and SURE (Activity 3.1.2.2) will entail the PMO coordinating the participation of the technical and financial experts who will be designing and developing the training materials and evaluation procedures in the overall design of the capacity building program. The PMO will also coordinate with the primary target group of trainees for the program, i.e., local</p>

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		<p>the indicator. (13) Project Result Framework (page 83-85): Based on the response to the above comments 12 and 13, please revise annex B and N.</p> <p>MO June 6, 2017 (12) Component 5, Output 5.1 will focus on schools and universities but the activities 5.1.3 and 5.1.4 mix with communities and local authorities. It is understood that output 5.3 will focus on these stakeholders. Please revise. Other comments cleared.</p> <p>MO June 15 2017 Comment cleared.</p>	<p>banks and financial institutions (FIs), as well as potential investors (community level businesses), and suppliers/distributors of RET and DSM/EE system equipment to enhance their knowledge and interest in financing RE and DSM/EE in Samoa. Since the main stakeholders/beneficiaries are local banks and FIs that will sign MOUs with the project for their involvement in the implementation of proposed financing schemes, the design, organization and conduct a promotional program on RE and DSM/EE investments for the local banking/financial sector (Activity 3.1.2.1) has to be implemented to get their buy-in and be part of the IMPRESS Project. The assessment of the capacity building needs of these stakeholders is part of the promotional activities, and the assessment results will be used for design and implementation of the capacity building program for banks, FIs and potential investors. For a wider audience, the capacity building program design, organization, implementation and evaluation will be coordinated by the PMO with the target groups of stakeholders, aside from the experts who will design and carry out the capacity building program.</p> <p>Promotional and awareness raising activities typically targeted to large audiences. There are possible opportunities for synergies in coordinating and implementing these activities with capacity building programs that are meant for large or multi-stakeholders. For example, to effectively deliver of actual RE and DSM/EE</p>

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			<p>investments by end-users, project developers and investors (Output 3.1.3), the necessary promotional activities to create/enhance awareness and knowledge of potential investors of RE (including PURE and SURE) and DSM/EE projects in Samoa (Activity 3.1.3.1) will be by and large be based on the capacity building program for the local banks, FIs, and potential investors. The promotional program can also include, the provision of assistance to potential beneficiaries in identifying actual investment projects and qualifying for financial support will also have to be done (Activity 3.1.3.2). In that case, the design and implementation of the promotional campaign for potential investors of RE DSM/EE initiatives and potential beneficiaries of the financing schemes, will be closely coordinated with the activity on the provision of assistance to potential financing beneficiaries in the development and implementation of RE and DSM/EE investment projects (Activity 3.1.3.2) and in securing financing (Activity 3.2.2.1).</p> <p>(6) Yes the business model for biomass resources production will be used in the barrier removal activities in Component 4. Please see explanations for Activities 4.1.1, 4.1.2, 4.1.3 and 4.2.1 in Annex 1. The results of the biomass energy business development studies will be the bases of the work that will be done in these activities.</p>

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			<p>(7)</p> <p>The project proponents are not clear about the comment. Firstly the stated Outcomes 3.1 and 3.2 are not the ones stated in the Project Document. As per design and as clearly stated in the Project Document, Outcome 3.1 is improved availability of, and access to, financing for electricity DSM, power/non-power RE application and electricity system performance improvement projects. Among the 3 outputs that will contribute to the achievement of this outcome is a set of feasible financing models and schemes designed and developed to serve as incentives for RE and Demand Side Management (DSM)/EE projects (Output 3.1.1). This and the 2 other outputs: Completed capacity buildings for the local banks and financial institutions (FIs) on financing RE and DSM/EE projects including those on PURE and SURE (Output 3.1.2); and, Actual RE and DSM/EE investments by end-users, project developers and investors (Output 3.1.3), will facilitate the operationalization of the financial schemes.</p> <p>Again, as clearly stated in the Project Document, the expected Outcome 3.2 is the national government (GOS) and financial sector providing financing for EE, and productive & social uses of RE. The targets are EE and PURE/SURE projects in rural areas. Among the 2 outputs that will contribute to the realization of this outcome is an established and operationalized government financing</p>

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			<p>scheme(s) for feasible RE and DSM/EE technologies application projects. The other one is DSM/EE and RET application projects financed either through the established financing scheme or by private sector investment (Output 3.2.1). This and the other output: DSM/EE and RET application projects financed either through the established financing scheme or by private sector investment (Output 3.2.2) will facilitate the operationalization of government financing schemes.</p> <p>The Activity number in Para 138 has been corrected to read as Activity 3.1.1.5.</p> <p>(8)</p> <p>The complementarities of the activities that were pointed out are recognized, and the coordination arrangements for the implementation of these activities have already been further elaborated in the revised Project Document. These are summarized in Annex 2 of this document.</p> <p>(9)</p> <p>Yes. The demonstration is meant to showcase the appropriate technology to address the grid instability problems associated with the increased integration of RE-based power systems into the existing grid. The demonstration is an enhancement of the planned grid stability and reliability project of the EPC and will feature improvements in the utilization of the planned SCADA system for</p>

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			<p>system reliability enhancement (e.g., to accommodate optimum load dispatch), and for capacity building for better utilization of power system modeling.</p> <p>(10) The proposed arrangement for the OSS was based on suggestions of the MNRE. Inasmuch as the MNRE currently has limited capacity, the agreement was for the IMPRESS PMU to carry out the proposed functions of the OSS for the initial operations. Thereafter, the MNRE will take over the OSS operations. To consider the reviewer's recommendation, revisions were made on the description of Activity 1.1.4 to stipulate that the OSS will be created as an integral part of the RE Division (REF) of the MNRE, and that the OSS's initial operation will be supported directly by the IMPRESS PMU, as part of the capacity building for the RED/MNRE in the provision of advisory services and implementation support by the OSS as specified in the existing regulations and will be defined in the future revisions carried out under Activity 1.1.1.</p> <p>(11) The indicator has been revised to read: Number of biomass-based power generation units integrated into the EPC grid system. The impacts of the non-power applications will be monitored and reported during the IMPRESS project implementation period. Thereafter, the monitoring of both power and non-power RE</p>

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			<p>applications will be part of the work of the RED/MNRE, particularly in the operation of the OSS website, which will support the monitoring and reporting of RE resource supply and consumption in Samoa.</p> <p>(12) Thanks for pointing this out. The indicator is to manifest the achievement of Outcome 5, referring to the capacity development interventions that are included under Component 5. The indicator has been revised to read: Number of trained local authorities, i.e., local government officials) that are capable of developing, planning and implementing RE, DSM/EE and PURE/SURE projects.</p> <p>(13) The relevant items in Annexes B and N have been revised as per the response to Comments 11 and 12.</p> <p>(12) As stated in the Project Document, Activity 5.1.3 is on the conduct training of trainers for RE and DSM/EE courses and prepare implementation plan; and, Activity 5.1.4 is on the implementation of training courses and conduct training course evaluations, and impact evaluation a year later. These activities correspond to the capacity development for the education sector, i.e., schools and universities. The title of Activity 5.1.5 has been corrected to specifically state schools and universities.</p>

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Review Criteria	Questions	Secretariat Comment at CEO Endorsement	Response to Secretariat comments
	3. Is the financing adequate and does the project demonstrate a cost-effective approach to meet the project objective?	MO April 12, 2017 Please see box 2 (4), (5) and (8). MO June 6, 2017 Comments cleared.	Please refer to the above responses to Comments 4, 5 and 8 under Question 2.
	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)	MO April 12 2017 (1) Please include risks of market of biomass renewable supply and demand as well as perverse incentive of biomass demand to respond comments from the Council Member (Germany). The latter risk is discussed in Annex F, but it is appropriated to discuss in the main document on page 79. MO June 6, 2017 Comment cleared.	The explanation on how these 2 potential risks will be mitigated is presented in Para 204 (p. 79) of the Project Document. For the latter risk, the explanations in Annex F have been replicated in Para 204 as suggested by the reviewer. The proposed mitigation actions for these 2 risks are included in the Risk Table (Items 6, 7 and 7) in Page 80, and Annex H of the Project Document.
	5. Is co-financing confirmed and evidence provided?	MO April 12, 2017 Yes.	
	6. Are relevant tracking tools completed?	MO April 12, 2017 Yes.	
	7. <i>Only for Non-Grant Instrument:</i> Has a reflow calendar been presented?	NA	
	8. Is the project coordinated with other related initiatives and national/regional plans in the country or in the region?	MO April 12 2017 Yes.	
	9. Does the project include a budgeted M&E Plan that	MO April 12, 2017 Yes.	

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Review Criteria	Questions	Secretariat Comment at CEO Endorsement	Response to Secretariat comments
	monitors and measures results with indicators and targets?		
	10. Does the project have descriptions of a knowledge management plan?	MO April 12, 2017 Yes.	
Agency Responses	11. Has the Agency adequately responded to comments at the PIF ³ stage from:		
	<ul style="list-style-type: none"> • GEFSEC 	MO April 12, 2017 Yes.	
	<ul style="list-style-type: none"> • STAP 	MO April 12, 2017 (1) Response to comment on biomass supply discusses that PPG stage will answer the question. As PPG finalized, please provide the finding through PPG to respond the comment. MO June 6, 2017 Comment cleared.	As was conceptualized during the PIF development stage, the IMPRESS Project has been designed to include the demonstration of biomass-based power generation technology utilizing the biomass feedstock owned by STEC. This ensures reliable biomass supply for the power generation. Organic waste is used in the demonstrations on biogas generation, recovery and utilization in rural areas. The available organic waste (e.g., agro-waste and livestock waste) will be used in bio-digesters for generating biogas that will be used for non-power applications. Slurry from bio-digesters will be used as fertilizers in agriculture fields. The proposed designs of the biomass-based energy generation demos (power and non-power applications) are described in Annex K.
	<ul style="list-style-type: none"> • GEF Council 	MO April 12 2017 (1) On risks please see box 4. (2) On INDC, we understand that Samoa already submitted INDC. Please explain what is the meaning	(2) The comment on the IMPRESS PIF was made on 13 October 2015 when the Samoa INDC document was actually just completed but not yet submitted to the UNFCCC. Samoa

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.

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Review Criteria	Questions	Secretariat Comment at CEO Endorsement	Response to Secretariat comments
		<p>to discuss that "Samoa's INDC is still being formulated". Also the response discuss that PPG exercise will identify and design activities to realize the %RE target. Please explain what is the result of PPG to respond this comment.</p> <p>(3) On biomass demand, the response discusses that the entire value chain shall take into account. Component 4 provides the value chain, but it is only for RE use stages, which do not necessarily look at biomass power generation for grid (this part will be implemented under component 2). Please clarify if which component/outcome will address entire value chain. Also please explain how monitoring and evaluation as well as follow-up activities will be developed to avoid un-sustainable demand of biomass.</p> <p>(4) On biomass demand, the response discuss that project design and development stage will investigate more detail aspect. Please provide result of PPG on this concern.</p> <p>MO June 6, 2017 (1) comment cleared. (2) - (4) endorsement request document (page 25-27) has not been revised. Please include responses of</p>	<p>submitted its INDC on 22 April 2016. As stated in Project Document, the IMPRESS Project endeavors to facilitate the realization of an alternative scenario that will bring the country towards the realization of its %RE electricity target. This will directly contribute to the achievement of the goal of 20% of all energy services to be supplied by renewable energy resources by 2030 as mentioned in the Strategic Action Plan of the National Energy Policy. Hence, the whole essence of the proposed activities is the facilitation of the use of indigenous renewable energy resources for energy production in Samoa to directly and indirectly contribute to the achievement of the country's %RE electricity target.</p> <p>(3) In the context of biomass value chain, while both Components 2 and 4 will involve power and non-power applications, it is the latter that will involve a wider coverage of interventions. As designed, there are interventions in Component 2 that will deliver: (a) Operational biomass-based power generation demonstrations (Output 2.2.3); and, (b) Operational biomass energy technology demonstrations for non-power applications in selected communities (Output 2.2.4). In regards, value chain, the focus is more on the supply side with the delivery of recommended feasible and suitable business models for sustainable biomass resource (i.e., any sustainably available biomass) production,</p>

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Review Criteria	Questions	Secretariat Comment at CEO Endorsement	Response to Secretariat comments
		<p>"After PPG exercise".</p> <p>MO June 15 2017 Comment cleared.</p>	<p>harvesting, processing and supply for biomass-based power and non-power uses in Samoa. On the other hand, as designed, Component 4 covers power and non-power applications in rural areas. It includes the delivery of a set of feasibility studies on new business ideas in 3 areas: RE power; RE non-power (e.g., biogas and efficient cook stove); and, RE Technology (RET) service providers, focusing on the analysis of impacts of RE on the whole value chain of the production or manufacturing of products. Each value chain will be studied in detail (i.e. stakeholder, value, role, effectiveness and gaps). For example on the demand side, and in the context of production in rural communities in Samoa, multiple value chains (e.g. farmers, processors and distributors) may be the same entity. On the supply side, the relevant activity under this component focuses on the development of RET service providers. RETs that have good potential for productive use of renewable energy (PURE) business development are those that utilize biogas and biomass energy resources. The feasibility study on the biomass energy technology service provision will focus on biomass for household cooking and thermal processes in rural industries (e.g., crop drying, metal working), and covers aspects of business potential, market size, and value chains. Component 4 also includes the delivery of appropriate business models for RE power and non-power applications for productive and social uses. Considering the entire value chain,</p>

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			<p>the development of business models will involve assessment of the capacity and available resources of potential communities, entrepreneurs and social institutions that can develop and operate businesses related to RE utilization either for production of electricity or for other energy purposes. Based on these assessments, the appropriate business models and replication plan for potential communities, entrepreneurs and social institutions are developed. Lastly, Component 4 also is designed to deliver established and operationalized businesses involving productive and social uses of RE. To ensure the successful and sustained operation of these value chain businesses adequate training of potential communities, entrepreneurs and social institutions on productive use of RE in both products and services will be carried out. The private entrepreneurs will also be assisted during the start-up and operation of their respective business, and their business operation performance will be monitored and evaluated. Information about the successes and lessons learned from the establishment and operation of these value chain businesses that will support the RE development, energy access, and sustainable development in rural areas will be documented and disseminated. To prevent negative impacts of the production of biomass feedstock for energy use on communities and environments, the project includes an intervention (Activity 2.1.2.4) that involves the analysis of the social, economic</p>

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			<p>and environmental aspects of the biomass feedstock supply chain, covering the biomass plantation, harvesting, processing and production. A monitoring scheme will be developed as part of the analytical study to ensure that the new biomass supply chains will be beneficial to the communities and will not lead to pollution, unmanageable wastes or misuse of natural resources, i.e., invasion of natural forest for biomass plantation, etc. Such scheme will be incorporated in a biomass resource assessment (e.g., annual supply and use) and harvesting plan that will be developed for the MERD to ensure that the biomass supply chain is sustainable and that no negative impacts are generated in the ecosystem. The monthly volumes of organic waste materials that are generated and are used as energy resource will also be monitored. The safe and sustainable use of such materials will also buffer any potential increase in the demand for biomass resources for energy production.</p> <p>(4) The issue that will be investigated in more detail during the project design and development stage is alleged unintended consequences of using biomass. This was done during the PPG exercise, particularly in the design of the demonstrations. In the context of the biomass-based power generation demonstration, this will be implemented in a plot of land owned by STEC. This state-owned entity intends to develop this land for a fast-</p>

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			<p>growing tree plantation, and production and utilization of the harvested and processed biomass for generating electricity that will be sold to the EPC power grid. About 71% of the STEC land is covered by forest, and majority of the trees in the forest area are from seven known fast growing invasive species. Based on the conservative estimate of the timber volume in the STEC land, the forest area would have almost 110,000 tons of timber available. For a 15 year rotation, around 7,300 ton of biomass could be harvested per year. In regards the potential increased in emissions from the transport of biomass fuel, this is deemed minimal because the biomass-based energy generation units is within the immediate vicinity of the biomass fuel source.</p> <p>The investigation into the potential risk of a need for more biomass to fuel increasing demand for electricity through the upscaling efforts shows that this is something that can be mitigated by proper planning of biomass harvesting and processing, use of agro-forestry waste, and increased utilization of other alternative non-vegetation organic materials (e.g., animal waste). Moreover, analyses done in regards biomass resource utilization indicate that chances of land use change due to the use of biomass resources for energy production is slim. For example, the utilization of agricultural or forest wastes/residues does not result in land use change, inasmuch as the use of woody biomass does not. Investing in forestry and woodland partly to produce</p>

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			<p>feedstock for biomass energy generation does not lead to land use change because a woodland is not being replaced by a non-woodland. For the sake of fuel supply security, the biomass-based energy generation units will have to be located as much as possible within the vicinity of the biomass fuel source. The design of the entire value chain of the biomass-based energy systems shall take into account documented reports on the environmental impacts of the deployment and operation of these facilities in the context of small island countries in their design, engineering, installation and operation.</p> <p>The "After PPG Exercise" responses to the comments raised by the German Council Member on the PIF (dated 13 October 2015) are now included in the CEO Endorsement Request Document. These are for the previous responses (during the PIF development stage) that state follow-up work will be done during the PPG exercise (2nd, 4th & 5th). For responses to comments that sought clarifications (1st & 3rd) no "After PPG Exercise" responses are provided.</p>
	<ul style="list-style-type: none"> • Convention Secretariat 	NA	
Recommendation	12. Is CEO endorsement recommended?	<p>MO April 12, 2017 Not at this time. Please address comments in box 1, 2, 3, 4 and 11.</p> <p>MO June 6, 2017 Not at this time. Please address comments in box 2 and 11.</p>	

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Review Criteria	Questions	Secretariat Comment at CEO Endorsement	Response to Secretariat comments
		MO June 15, 2017 All comments cleared. Program Manager recommends CEO endorsement.	
Review Date	Review	April 05, 2017	
	Additional Review (as necessary)	June 06, 2017	
	Additional Review (as necessary)	June 15, 2017	