



GEF-6 REQUEST FOR PROJECT ENDORSEMENT/APPROVAL

PROJECT TYPE: FULL-SIZED PROJECT

TYPE OF TRUST FUND: GEF TRUST FUND

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PART I: PROJECT INFORMATION

Project Title: Improving the Performance and Reliability of RE Power Systems in Samoa (IMPRESS)			
Country(ies):	Samoa	GEF Project ID: ¹	9251
GEF Agency(ies):	UNDP	GEF Agency Project ID:	5669
Other Executing Partner(s):	In Samoa: Ministry of Natural Resources & Environment (MNRE)	Submission Date:	14 June 2017
GEF Focal Area (s):	Climate Change	Project Duration (Months)	60
Integrated Approach Pilot	IAP-Cities <input type="checkbox"/> IAP-Commodities <input type="checkbox"/> IAP-Food Security <input type="checkbox"/>	Corporate Program: SGP <input type="checkbox"/>	
Name of Parent Program	[if applicable]	Agency Fee (\$)	577,204

A. FOCAL AREA STRATEGY FRAMEWORK AND OTHER PROGRAM STRATEGIES²

Focal Area Objectives/Programs	Focal Area Outcomes	Trust Fund	(US\$)	
			GEF Project Financing	Co-financing
CCM-1 Program 1	Promote timely development, demonstration and financing of low carbon technologies and mitigation options	GEFTF	6,075,828	46,489,200
Total Project Costs			6,075,828	46,489,200

B. PROJECT DESCRIPTION SUMMARY

Project Objective: Improved sustainable and cost-effective utilization of indigenous renewable energy resources for energy production in Samoa						
Project Components/Programs	Financing Type ³	Project Outcomes	Project Outputs	Trust Fund	(US\$)	
					GEF Project Financing	Confirmed Co-financing
1. Enhancement of Renewable Energy Policy Formulation and Implementation	TA	1: Enforcement of clear and consistent policies and regulations that are supportive of the development and implementation of RE-based power	1.1: Established and enforced clear and consistent RE policy and legal frameworks for RE (power and non-power) development and implementation 1.2: Comprehensive energy integrated development plans formulated by skilled	GEFTF	329,000	812,250

¹ Project ID number remains the same as the assigned PIF number.

² When completing Table A, refer to the excerpts on [GEF 6 Results Frameworks for GETF, LDCF and SCCF](#) and [CBIT programming directions](#).

³ Financing type can be either investment or technical assistance.

		generation in support of national economic development	and capable government development planners 1.3: Formulated and approved EE implementation regulations to promote EE 1.4: Formulated and approved policy measures to incentivize communities and private sector for RE production			
2. RE-based Energy System Improvements	TA	2.1: Enhanced operating performance and reliability of RE power systems (generation and distribution) in major islands	2.1.1: Completed power system profile and analysis of grid performance and power quality 2.1.2: Completed assessment of the various available biomass energy resources in Samoa, including biomass energy resource production business model 2.1.3: Applicable cost-effective RE-based power generation technologies that are feasible in Samoa, including technologies for enhancing the electricity system performance and reliability identified 2.1.4: Completed designs and implementation plans for the application of technologies for enhancing electricity system stability and energy performance 2.1.5: Published information on performance and impact on each implemented RE technology application and demonstration	GEFTF	772,450	2,427,250
	Inv	2.2: Increased application of biomass-based	2.2.1: Completed preliminary engineering designs and	GEFTF	3,836,700	40,496,450

		energy for power and non-power uses	implementation plans for biomass-based energy for power and non-power uses demonstrations 2.2.2: Operational biomass production facility for biomass-based power generation 2.2.3: Operational biomass-based power generation demonstrations 2.2.4: Operational biomass energy technology demonstrations for non-power applications in selected communities 2.2.5: Documented operating and energy performances of demonstrations 2.2.6: Technically capable and qualified personnel for managing, operating and maintaining the demo units/facilities			
		2.3: Increased application of power system performance and reliability enhancement technologies	2.3.1: Detailed designs and specifications for demonstrations for power system performance and grid system reliability enhancement 2.3.2: Operational demonstrations of power system stabilization technologies in the EPC power grid system 2.3.3: Documented operating and energy performances of demonstrations 2.3.4: Approved plans for the replication and/or scale up of the demos on minimizing/abating potential system instability in the EPC power grid system			

3. Financing of Initiatives for Electricity Saving, Productive and Social Uses of RE Electricity, and Electricity System Performance Improvement	TA	3.1: Improved availability of, and access to, financing for electricity DSM, power/non-power RE application and electricity system performance improvement projects	3.1.1: Feasible financing models and schemes designed and developed to serve as incentives for RE and Demand Side Management (DSM)/EE projects 3.1.2: Completed capacity buildings for the local banks and financial institutions (FIs) on financing RE and DSM/EE projects including those on PURE and SURE 3.1.3: Actual RE and DSM/EE investments by end-users, project developers and investors	GEFTF	227,700	194,750
	TA	3.2: GOS and financial sector providing financing for EE, and productive & social uses of RE	3.2.1: Established and operationalized government financing scheme(s) for feasible RE and DSM/EE technologies application projects 3.2.2: DSM/EE and RET application projects financed either through the established financing scheme or by private sector investment	GEFTF	110,000	622,250
4. Productive & Social Uses of RE	TA	4: Increased demand and utilization of RE for productive and social uses	4.1: Completed feasibility studies of new business ideas for productive and social uses of RE 4.2: Established appropriate business models for RE power and non-power for productive and social uses 4.3: Established and operationalized business(es) involving productive and social uses of RE	GEFTF	175,950	555,560
5. Enhancement of Awareness on the Applications	TA	5: Improved awareness about RE and EE technology	5.1: Completed capacity development on RET (design, engineering, financing, construction,	GEFTF	334,703	1,078,440

and Benefits of RE/EE		applications to support national economic development	operation and maintenance) for schools and universities 5.2: Established operational information network for the promotion, dissemination and information sharing of RE and DSM/EE technology, policy measures, incentives and financial schemes 5.3: Completed promotional activities of communities, entrepreneurs, institutions and local government authorities on RE and DSM/EE technologies, applications and policy planning			
Subtotal					5,786,503	46,186,950
Project Management Cost (PMC) ⁴				GEFTF	289,325	302,250
Total Project Costs					6,075,828	46,489,200

C. CONFIRMED SOURCES OF **CO-FINANCING** FOR THE PROJECT BY NAME AND BY TYPE

Please include evidence for [co-financing](#) for the project with this form.

Sources of Co-financing	Name of Co-financier	Type of Co-financing	Amount USD
National Government	Ministry of Finance (MOF) and Ministry of Natural Resources and Environment (MNRE)	Grant	38,189,200
		In-kind	2,250,000
Private Sector	Samoa Trust Estates Corporation (STEC)	In kind	6,000,000
GEF Agency	United Nations Development Programme (UNDP)	Grant	50,000
Total Co-financing			46,489,200

D. TRUST FUND RESOURCES REQUESTED BY AGENCY(IES), COUNTRY(IES), FOCAL AREA AND THE PROGRAMMING OF FUNDS

GEF Agency	Trust Fund	Country Name/Global	Focal Area	Programming of Funds	(in \$)		
					GEF Project Financing (a)	Agency Fee ^{a)} (b) ²	Total (c)=a+b
UNDP	GEFTF	Samoa	Climate Change	N.A.	6,075,828	577,204	6,653,032
Total Grant Resources					6,075,828	577,204	6,653,032

a) Refer to the [Fee Policy for GEF Partner Agencies](#)

⁴ For GEF Project Financing up to \$2 million, PMC could be up to 10% of the subtotal; above \$2 million, PMC could be up to 5% of the subtotal. PMC should be charged proportionately to focal areas based on focal area project financing amount in Table D below.

E. PROJECT'S TARGET CONTRIBUTIONS TO GLOBAL ENVIRONMENTAL BENEFITS⁵

Provide the expected project targets as appropriate.

Corporate Results	Replenishment Targets	Project Targets
4. Support to transformational shifts towards a low-emission and resilient development path	750 million tons of CO _{2e} mitigated (include both direct and indirect)	985 ktCO _{2e}

Note: The project target is based on direct, direct post and indirect top-down GHG emission reduction estimation.

F. DOES THE PROJECT INCLUDE A “NON-GRANT” INSTRUMENT? No

(If non-grant instruments are used, provide an indicative calendar of expected reflows to your Agency and to the GEF/LDCF/SCCF/CBIT Trust Fund) in Annex D.

PART II: PROJECT JUSTIFICATION

A. DESCRIBE ANY CHANGES IN ALIGNMENT WITH THE PROJECT DESIGN WITH THE ORIGINAL PIF⁶

A.1. Project Description. Elaborate on: 1) the global environmental and/or adaptation problems, root causes and barriers that need to be addressed; 2) the baseline scenario or any associated baseline projects, 3) the proposed alternative scenario, GEF focal area⁷ strategies, with a brief description of expected outcomes and components of the project, 4) [incremental/additional cost reasoning](#) and expected contributions from the baseline, the GEFTF, LDCF, SCCF, CBIT and [co-financing](#); 5) [global environmental benefits](#) (GEFTF) and/or [adaptation benefits](#) (LDCF/SCCF); and 6) innovativeness, sustainability and potential for scaling up.

There are no changes at the Objective and Component levels. Taking into account the changes to the baseline, some changes to outputs were identified during the PPG. These changes are reflected in the Project Result Framework presented from page 77-79 of the Project Document.

The changes from the PIF Project Framework are as follows:

PIF Project Framework Components	Changes Reflected in ProDoc & Explanations
COMPONENT 1	
Output 1.1: Completed evaluation of the existing National Energy Policy (NEP) and formulation of recommended updates and revisions to the current policies and support actions.	Revision of the Output statement to “Established and enforced clear and consistent RE policy and legal frameworks for RE (power and non-power) development and implementation”. This is to reflect merging of PIF Output 1.1, 1.2 and 1.4 into Output 1.1 in the Project Document.
Output 1.2: Completed research on RE development and utilization policies and measures that are successfully applied and implemented in other small island developing states (SIDS) and	This is now merged with Output 1.1 in the Project Document.

Update the applicable indicators provided at PIF stage. Progress in programming against these targets for the projects per the *Corporate Results Framework* in the [GEF-6 Programming Directions](#), will be aggregated and reported during mid-term and at the conclusion of the replenishment period.

⁶ For questions A.1 –A.7 in Part II, if there are no changes since PIF, no need to respond, please enter “NA” after the respective question.

⁷ For biodiversity projects, in addition to explaining the project’s consistency with the biodiversity focal area strategy, objectives and programs, please also describe which [Aichi Target\(s\)](#) the project will directly contribute to achieving.

their corresponding socio-economic and environmental impacts.	
Output 1.3: Improved systems for national energy balance assessment and energy planning, including national electricity development and infrastructure planning.	Revision of the Output statement to “Comprehensive energy integrated development plans formulated by skilled and capable government development planners”. This is to emphasize the consolidation with PIF Output 1.10. This output is now designated as Output 1.2 in the Project Document.
Output 1.4: Revised national %RE electricity target (magnitude and schedule), including proposed (for approval) plan of action to realize target.	This is now merged with Output 1.1 in the Project Document.
Output 1.5: Formulated and recommended policies and implementing rules and regulations (IRRs) on the promotion and support of private sector participation in all aspects of the country’s RE electricity development program (generation, distribution, engineering, financing, construction, operation and maintenance).	Revision of the Output Statement to “Formulated and approved policy measures to incentivize communities and private sector for RE production”. This is to reflect consolidation of PIF Output 1.5, 1.6, 1.7 and 1.8 into a single output. This output is now designated as Output 1.4 in the Project Document.
Output 1.6: Adopted and enforced standards, policies, and IRRs on the promotion and support of RE-based power generation, and the participation of the private sector in all aspects of RE electricity development.	This is merged with PIF Output 1.5, and now designated as Output 1.4 in the Project Document.
Output 1.7: Approved and enforced policies and IRRs in supporting financing of the productive and social uses of RE electricity.	This is merged with PIF Output 1.5, and now designated as Output 1.4 in the Project Document.
Output 1.8: Completed report on the impacts of RE electricity in the socio-economic development of Samoan communities.	This is merged with PIF Output 1.5, and now designated as Output 1.4 in the Project Document.
Output 1.9: Approved follow-up plan for the evaluation and updating of RE electricity development planning and policies.	This is merged with PIF Output 1.3 and now designated as Output 1.2 in the Project Document.
Output 1.10: Qualified Government of Samoa (GOS) personnel that regularly capably carry out national energy planning and energy supply, demand and consumption monitoring and forecasting.	This output is merged with PIF Output 1.3 and now designated as Output 1.2 in the Project Document.
	A new output was created and designated as Output 1.3: Formulated and approved EE implementation regulations to promote EE. This is to reflect the recommendation from the LFA workshop on the enhanced scope of Component 1 to address EE.
COMPONENT 2	
	A new output was created and designated as Output 2.1.1: “Completed power system profile and analysis of grid performance and power quality”. This is to emphasize the importance of

	understanding the current grid characteristics before any further studies on RE-based power generation and the electricity system performance and reliability.
Output 2.1.1: Completed evaluation of applicable cost-effective RE-based power generation technologies that are feasible in Samoa, including technologies for enhancing the electricity system performance and reliability.	This is now designated as Output 2.1.3 and re-stated as “Applicable cost-effective RE-based power generation technologies that are feasible in Samoa, including technologies for enhancing the electricity system performance and reliability identified”.
Output 2.1.2: Completed designs and implementation plans for the application of technologies for enhancing electricity system stability and energy performance.	This is now designated as Output 2.1.4 in the Project Document.
Output 2.1.3: Completed designs and implementation plans of demonstrations of other RE-based power generation technologies, specifically biomass energy conversion-based systems.	This is merged with PIF Output 2.1.7, and now designated as Output 2.2.1 in the Project Document.
Output 2.1.4: Completed assessment and characterization of the various available biomass energy resources in Samoa, including biomass energy resource production.	This is now designated as Output 2.1.2 and re-stated as “Completed assessment of the various available biomass energy resources in Samoa, including biomass energy resource production business model”.
Output 2.1.5: Completed business model for sustainable biomass resource production, harvesting, processing and supply and pricing for biomass-based power generation systems.	This is merged with PIF Output 2.1.4, and now designated as Output 2.1.2 in the Project Document.
Output 2.1.6: Published energy performance and impact reports on each implemented RE technology application demonstration.	This is now designated as Output 2.1.5 and re-stated as “Published information on performance and impact on each implemented RE technology application demonstration”.
Output 2.1.7: Completed evaluation and design of community-based non-power applications of RETs, particularly biomass-based; including action plan for the design, engineering, financing and implementation of such RET applications.	This is merged with PIF Output 2.1.3, and now designated as Output 2.2.1 in the Project Document.
Output 2.1.8: Documented annual evaluation reports on the energy performance and impacts of each demonstration, and non-power applications of RETs in Samoan communities.	This is now merged with Output 2.1.5 the Project Document.
Output 2.1.9: Completed capacity development program for national government authorities and local community leaders on the application of RE-based energy systems for power and non-power applications.	This is now designated as Output 5.3 the Project Document.
Outcome 2.2: Increased application of biomass-based power generation systems	Minor text revision to the Outcome statement, which now reads “Increased application of biomass-based energy for power and non-power uses”

	A new output was created and designated as Output 2.2.1: “Completed preliminary engineering designs and implementation plans for biomass-based energy for power and non-power uses demonstrations”. This is to reflect merging of PIF Output 2.1.3 and 2.1.7 and their relevance to the biomass-based energy for power and non-power demonstration projects.
Output 2.2.1: Completed and operational biomass production facility based on the business model for sustainable biomass resource production, harvesting, processing and supply and pricing for biomass-based power generation systems.	This is now designated as Output 2.2.2 in the Project Document and re-stated as “Operational biomass production facility for biomass-based power generation”
Output 2.2.2: Completed and operational biomass energy conversion-based power generation demonstrations in selected pilot areas.	This is now designated as Output 2.2.3 in the Project Document and re-stated as “Operational biomass-based power generation demonstrations”
Output 2.2.3: Completed and operational biomass energy technology demonstrations for non-power applications in selected communities.	This is now designated as Output 2.2.4 in the Project Document and re-stated as “Operational biomass energy technology demonstrations for non-power applications in selected communities”
	A new output was created and designated as Output 2.2.5: “Documented operating and energy performances of demonstrations”. This is to emphasize the importance of monitoring and verification activities for each demonstration projects.
	A new output was created and designated as Output 2.2.6: “Technically capable and qualified personnel for managing, operating and maintaining the demo units/facilities”. This is to emphasize the importance of the capacity of demonstration site personnel in operation and maintenance of the demonstration projects in a long-term.
Outcome 2.3: Increased application of power system performance and reliability enhancement technologies in the country’s power sector	Minor text revision to the Outcome statement, which now reads “Increased application of power system performance and reliability enhancement technologies”
	A new output was created and designated as Output 2.3.1: “Detailed designs and specifications for demonstrations for power system performance and grid system reliability enhancement”. This is to emphasize the importance of the design step of the demonstration projects.
Output 2.3.1: Completed and operational demonstrations of power system stabilization technologies in the Samoa Electric Power Corporation (EPC) system.	This is now designated as Output 2.3.2 and re-stated as “Operational demonstrations of power system stabilization technologies in the EPC power grid system”.

Output 2.3.2: Documented technology replication plans for minimizing/abating potential system instability in the other EPC systems.	This is now replaced by Output 2.3.2 and re-stated as “Operational demonstrations of power system 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
	This new output is an enhanced version of the original Output 2.3.2 and designated as Output 2.3.4: “Approved plans for the replication and/or scale up of the demos on minimizing/abating potential system instability in the EPC power grid system”. This is to reflect the enhanced scope of Outcome 2.3.
Output 2.3.3: Completed capacity building for EPC personnel in the optimum load dispatch of system power generation units for achieving overall least generation cost.	This has been replaced with a new Output 2.3.3, which is: Documented operating and energy performances of demonstrations. The original capacity building for EPC personnel is now part of Output 2.1.4 (Activity 2.1.4.2). The capacity building has been enhanced to include engineering students on RE and DSM/EE courses (design, engineering, financing, construction, operation and maintenance and optimum power dispatch).
Output 3.1.1: Completed design and development of feasible financing models and schemes to facilitate financing of electricity demand side management (DSM) and non-power RE application projects.	Re-stated as “Feasible financing models and schemes designed and developed to serve as incentives for RE and Demand Side Management (DSM)/EE projects”
Output 3.1.2: Completed capacity building for the existing local banks (including Samoa Ministry of Finance) on financing residential/commercial DSM and RE projects (including those on the productive and social uses of RE electricity).	Re-stated as “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 3.1.3: Completed technical assistance services to financing scheme applicants.	Re-stated as “Actual RE and DSM/EE investments by end-users, project developers and investors”
Outcome 3.2: GoS & financial sector providing financing for electricity saving, productive and social uses of RE electricity, and power system stabilization initiatives	Re-stated to include EE. It now reads as “GOS and financial sector providing financing for EE, and productive & social uses of RE”
Output 3.2.1: Established and operational financing scheme for DSM and RE projects, as well as for the productive and social uses of RE electricity in rural communities.	Re-stated as “Established and operationalized government financing scheme(s) for feasible RE and DSM/EE technologies application projects”
Output 3.2.2: Completed DSM and RET application projects financed either through the established financing scheme; or by private sector investments.	Re-stated as “Completed DSM/EE and RET application projects financed either through the established financing scheme or by private sector investment”
Output 3.2.3: Completed evaluation of suggested enhanced financing policies for supporting DSM, RE applications and power system stabilization initiatives.	This is now merge with Output 3.1.1 in the Project Document.

	A new output was created and designated as Output 4.1: “Completed feasibility studies of new business ideas for productive and social uses of RE”. This is to reflect the enhanced scope of Outcome 4.
Output 4.1: Completed assessment on the feasibility of the establishment and operation of a local RET supply and service provision industry.	This is now designated as Output 4.2 and re-stated as “Established appropriate business models for RE power and non-power for productive and social uses”.
Output 4.2: Completed assessment on the establishment of a sustainable biomass fuel supply industry.	This is now merged with Output 2.1.2 in the Project Document.
Output 4.3: Established and operational businesses (productive and social services) that make use of electricity supplied from RE-based power systems.	Re-stated as “Established and operationalized business(es) involving productive and social uses of RE” to emphasize the focus of the Output on productive and social uses of RE.
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.	This is now designated as Output 5.3 and re-stated as “Completed promotional activities of communities, entrepreneurs, institutions and local government authorities on RE and DSM/EE technologies, applications and policy planning”
Output 5.2: Completed outreach and investment promotion program on the commercial production, harvesting and processing of sustainable biomass for use in power and non-power applications.	This is merged with PIF Output 5.1 and now designated as Output 5.3 in the Project Document.
Output 5.3: 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.
Output 5.4: 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. There is no more Output 5.4.
Output 5.5: Developed and approved (and budgeted) follow-up program for capacity development of the energy sector in the optimum load dispatch of RE-based power generation systems.	This is now designated as Output 5.1 and re-stated as “Completed capacity development on RET (design, engineering, financing, construction, operation and maintenance) for schools and universities”
Output 5.6: Established information network for the promotion and dissemination of knowledge in the planning, operation, maintenance, cost-effective and reliable system performance of RE power generation systems.	This is now designated as Output 5.2 and re-stated as “Established operational information network for the promotion, dissemination and information sharing of RE and DSM/EE technology, policy measures, incentives and financial schemes”

Output 5.7: Enhanced RE resource supply and consumption monitoring and reporting system in the country.	This is merged with Output 2.1.2 in the Project Document.
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Estimated Project Budget

For now, there are no confirmed co-financing from Independent Power Producers that can be included in the project's financial plan. This is because the IPP's commitment for co-financing are mainly leveraged amounts. However this shortfall of expected co-financing from these actors (as stated in the GEF-approved PIF) has been compensated by greater co-financing contributions on RE-based power generation and power system enhancement projects of EPC that are subsumed into the IMPRESS project. EPC's and STEC's co-financing to the project are included in the co-financing commitment from the GOS as summarized below.

Source of Co-Financing	PIF (\$)	Project Document (\$)
Government of Samoa (MOF, MNRE, EPC)	4,920,000	40,439,200
Samoa Trust Estates Corporation (STEC)	1,500,000	6,000,000
Independent Power Producers (IPPs)	32,150,000	-
GEF Agency (UNDP)	50,000	50,000
Total	38,980,000	46,489,200

Emission Reductions

The direct and direct post project CO₂ emission reductions throughout the lifetimes of demo projects are estimated at 699.6 ktCO₂ and long-term CO₂ emission reductions range from 285 ktCO₂ to 2,099 ktCO₂. The total direct and Consequential (long-term) range from 984.9 to 2,798.2 ktCO₂. It should be noted that the estimation during preparation of PIF was based on outdated data on CO₂ emission from power generation in Samoa published by the World Bank⁸. The calculation of GHG emission reduction during the PPG phase was based on the actual power generation data and the power development plan provided by the utility in Samoa (EPC).

A.2. Child Project? *If this is a child project under a program, describe how the components contribute to the overall program impact. N.A.*

A.3. Stakeholders: *Elaborate on how the key stakeholders' engagement, particularly with regard to [civil society organizations](#) and [indigenous peoples](#), is incorporated in the preparation and implementation of the project.*

During project preparation, stakeholder analysis was undertaken to identify key stakeholders, assess their interests in the project and define their roles and responsibilities in project implementation. The primary government agencies with mandates to promote RE and EE in Samoa are the Ministry of Natural Resources & Environment (MNRE) and the Ministry of Finance (MOF). Other relevant and specific stakeholders engage in project implementation are identified in the table below.

⁸ Source: <http://data.worldbank.org/country/samoa>
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Stakeholders	Roles
Ministry of Natural Resources and Environment (MNRE)	<p>Responsible for communication and coordination with office of the GEF OFP and UNDP on project management, implementation and monitoring; liaison with relevant national government agencies, authorities in local communities; in-charge of project management and implementation;</p> <p>Renewable Energy Division (RED) – Provision of data/information on relevant RE resource research and feasibility studies, national energy plans, national energy balance, policies, regulations and energy targets, including ongoing and planned energy projects;</p> <p>Planning and Urban Management Agency (PUMA) – Provision guidance and information on the energy project compliance with environmental regulations;</p> <p>Forestry Division – Provision of support in assessment of biomass potential in Samoa.</p>
Ministry of Finance (MOF)	<p>Provision of data/information concerning relevant financial/fiscal policies and plans in energy;</p> <p>Energy Policy Coordination and Management Division (EPCMD) – Provision of information on the formulation and implementation of the Energy Sector Plan, including relevant policies and programs, including that relevant to the Petroleum Act;</p> <p>Economic Policy and Planning Division (EPPD) – Provision of assistance to all sectors for integration of the Energy Sector Plan and ensuring alignment with the Strategy for the Development of Samoa (SDS);</p> <p>Aid Coordination and Debt Management Division – Coordination with all other aids to ensure integrated approach toward meeting the objectives of the IMPRESS project and the national development.</p>
Ministry of Works, Transport and Infrastructure (MWTI)	<p>Provision of advice to ensure consistency of the IMPRESS project with the National Infrastructure Strategic Plan (NISP) 2011 – 2021, specifically in reducing Samoa's reliance on fossil fuels.</p>
Ministry of Women, Communities and Social Development (MWCSO)	<p>Provision of information and advice on the productive and social applications that can be supported by RE (e.g. biogas for heating, lighting and electricity generation);</p> <p>Provision of advice on the design of RE market sustainability interventions;</p> <p>Provision of assistance in the promotion of the proposed project activities that will focus on communities;</p> <p>Provision of advice in the formulation of RE policies that are supportive of sustainable economic development initiatives for communities.</p>
Ministry of Commerce Industry and Labour (MCIL)	<p>Provision of support and technical advice for local entrepreneurs in the design and establishment of businesses making use of RE;</p> <p>Provision of advice on development of financing models and schemes to finance electricity saving initiatives, productive and social uses of RE;</p> <p>Provision of support and assistance in implementation of awareness on sustainable RET investments.</p>
National Energy Coordinating Committee (NECC)	<p>Review and approval of relevant outputs produced by the IMPRESS project for integration into energy policies, initiatives, targets as well as the Energy Sector Plan.</p>
Samoa Trust Estates Corporation (STEC)	<p>Provision of pertinent data/information on biomass resources and management for the final design of the biomass-gasification demonstration project;</p> <p>Ensuring sufficient feedstock of biomass for sustainable operation of the biomass-gasification demonstration project;</p>

Stakeholders	Roles
	Coordination with MNRE and EPC on the design, planning, engineering, financing, and commercial operation of the biomass-gasification demonstration project.
Electric Power Corporation (EPC)	Provision of pertinent data/information about its electric system expansion program and power plants necessary for the detailed design of the reliability enhancement project; Coordination with MNRE and STEC on the design, planning, engineering, and commercial operation of the various RE-based power generation projects that will be subsumed into the project, including those on improved electricity system performance and reliability; Provision of coordination and support in capacity building and awareness activities.
Scientific Research Organization of Samoa (SROS)	Provision of data/information and technical advice on biomass properties for the detailed design of biomass gasification demonstration projects, and productive and social uses of RE.
Office of the Regulator (OOTR)	Provision of advice on the work currently being done and being planned to do in regards to the setting and review of electricity tariffs, electricity service quality standards, issuance of licenses, and advice on consumer protection.
Banks and Financial institutions - National Bank of Samoa Development Bank of Samoa (DBS), Samoa Commercial Bank (SCB), ANZ Bank, Bank of South Pacific (BSP)	Provision of financial services, loans and awareness activities that would enable investments in RE for power and non-power applications and for productive and social uses in Samoa.
Small Business Enterprise Centre (SBEC)	Provision of loan guarantee schemes and training that would enable investments in RE for power and non-power applications and for productive and social uses in Samoa.
Industry Associations and Chambers - Chamber of Commerce (COC), Women in Business Development Samoa (WIBDS), Samoa Association of Manufacturers and Exporters (SAME)	Provision of support in implementation of training activities to its members as well as coordination of trade marketing events, and implementation of awareness campaign related activities
Youth with a Mission (YWAM)	Provision of support in identification, development and implementation of biomass energy technology demonstrations for non-power applications in selected communities. Collaboration for capacity building and awareness activities in promoting sustainable RET applications in support of national economic development
Education Institutions/Universities (NUS and USP)	Collaboration in RE knowledge management and capacity building activities through development and possible integration of project experience in RE/EE-related curricular, and training programs

Stakeholders	Roles
Rural community citizens in the villages	Provision of information on the availability and supply of biomass resources; on the productive and social uses that can be supported by RE; advise on the design of RE market sustainability interventions
Development partners and donors (ADB, NZMFAT, IUCN, EU)	Provision of technical, economic and financial data/information on ongoing and planned RE (power and non-power) projects that are being supported in Samoa. Specific data/information provision on biomass energy technology applications in other PICs/SIDS
UNDP	As a GEF Implementing Agency, responsible for the provision of technical and operational oversight support through the project implementation phase. Assistance provided also includes other development assistance provided by UNDP directly to the Government of Samoa and in collaboration with developing partners in the region

A.4. Gender Equality and Women's Empowerment. *Elaborate on how gender equality and women's empowerment issues are mainstreamed into the project implementation and monitoring, taking into account the differences, needs, roles and priorities of women and men.*

The project will strengthen and enhance involvement of women in multiple areas, including design and development policy and regulatory frameworks, operation of biomass production and gasification facilities, income generation through productive use of renewable energy (PURE) and social use of renewable energy (SURE), development and implementation of capacity building and awareness programs. The Ministry of Woman, Communities and Social Development (MWCSD) will be involved in social monitoring of the demonstration projects to be implemented by the IMPRESS project, including a biomass gasification power generation project, community-based RE projects and the monitoring would include the flow of project benefits to communities and facilitate a gender balanced distribution of benefits.

Although interest of some works involved in the implementation of specific project components will be primarily from men due to the nature of the works (e.g. clearing of bush and chopping down trees), the project will ensure that gender considerations are embedded to equally engage men and women in the decision making process during project implementation. Plantation of feedstock is the possible operation where men, women, older citizens and people with disabilities can contribute equally. Gender equality and women's empowerment issues are mainstreamed into the relevant project components, which address the knowledge and capacity of Samoan households and communities. The Project will establish a strong knowledge base for women and youth on basic business skills, and also enhance their skills into formal employment. These will stimulate confidence to implement changes in Samoa. In addition, the Project will also monitor its gender related contributions by ensuring that project interventions have resulted in improved living conditions of both male and female members of the beneficiary populations; as well as verifying the impacts on income generation and livelihood opportunities through market surveys and evaluation activities to be implemented by the Project.

A.5 Risk. *Elaborate on indicated risks, including climate change, potential social and environmental risks that might prevent the project objectives from being achieved, and, if possible, the proposed measures that address these risks at the time of project implementation (table format acceptable):*

The key risks to the project implementation and the realization of outcomes will be monitored throughout the implementation of the Project. The Project Result Framework includes a detailed overview of critical assumptions anticipated during project preparation. An initial risk assessment, also used to inform the project design, was prepared during project preparation and is detailed in the Project Document: Annex H. UNDP Risk Log (pp.145-148). This Risk Log will serve as a management tool and will be reviewed and

updated during the project inception and implementation. The overall potential social and environmental risk rating is low to moderate as indicated in the Project Document: Annex F. UNDP Social and Environmental and Social Screening Template (SESP) (pp.137-140).

A.6. Institutional Arrangement and Coordination. *Describe the institutional arrangement for project implementation. Elaborate on the planned coordination with other relevant GEF-financed projects and other initiatives.*

The Project Implementing Partner (IP) will be MNRE, and UNDP is the GEF Implementing Agency (IA) for the project. MNRE and MOF will sign the Project Document with UNDP and will be accountable to UNDP for the disbursement of funds and the achievement of the project objective and outcomes, per the approved work plan. As per Harmonized Approach to Cash Transfers to Implementing Partners (HACT) framework, the micro assessment of this IP was undertaken with low risk rating. Direct cash transfer modality will be applied and subsequent quality assurance activities will be in line with the HACT scheme. UNDP will provide overall project oversight and regular monitoring functions support from its Country Office in Samoa and the UNDP Bangkok Regional Hub (BRH) in Bangkok, and will be responsible for monitoring and evaluation of the project as per normal GEF and UNDP requirements. MOC will designate a senior official of the Department of Science, Technology and Environment as the National Project Director (NPD) for the project. The NPD will be responsible for overall guidance to project management, including adherence to the Annual Work Plan (AWP) and achievement of planned results as outlined in the ProDoc, and for the use of GEF funds through effective management and well established project review and oversight schemes. The NPD also will ensure coordination with various ministries and agencies provide guidance to the project team to coordinate with UNDP, review reports and look after administrative arrangements as required by the Government of Samoa and UNDP. Relevant and specific stakeholders engaged in project implementation are identified and detailed in the Project Document pp. 74-76.

Additional Information not well elaborated at PIF Stage:

A.7 Benefits. *Describe the socioeconomic benefits to be delivered by the project at the national and local levels. How do these benefits translate in supporting the achievement of global environment benefits (GEF Trust Fund) or adaptation benefits (LDCF/SCCF)?*

There are several socioeconomic benefits of the Project including:

- Improvement of the living conditions of Samoans that currently don't have access to electricity and allows them to contribute more productively to the economy
- Protection of the natural environment through the reduction of fossil fuel combustion-generated air pollution, and proper disposal of biomass waste materials – This translates to reduced air pollution from the use of petroleum-based fuels for energy generation, leading to improvements in health benefits for the entire population. It also means safer and reduced solid waste materials disposal.
- Improvement in the welfare and well-being of women and children in rural communities, resulting from additional employments and job creations in the energy sector and at the household and community levels through the successful implementation of PURE and SURE projects
- Improvement in the country's foreign exchange reserves due to reductions in petroleum products import bill due to substitution of fossil energy utilization by indigenous RE resources, and diversification of the energy resource base of the economy.
- Enhanced awareness and knowledge of local communities and stakeholders on the benefits of RE, EE, PURE and SURE; resulting in enhanced capacities and opportunities for people to actively and gainfully participate in energy services provision

- Improved electricity system performance and reliability (e.g., less downtimes, less losses, optimized overall generation costs), which is expected in the long run to lead to reduced electricity tariffs.

A.8 Knowledge Management. *Elaborate on the knowledge management approach for the project, including, if any, plans for the project to learn from other relevant projects and initiatives (e.g. participate in trainings, conferences, stakeholder exchanges, virtual networks, project twinning) and plans for the project to assess and document in a user-friendly form (e.g. lessons learned briefs, engaging websites, guidebooks based on experience) and share these experiences and expertise (e.g. participate in community of practices, organize seminars, trainings and conferences) with relevant stakeholders.*

A comprehensive training program to enhance capacity of both core and non-core agencies in energy development, planning and implementation will be developed and implemented. The project will design a capacity building program focusing on the selected financial scheme(s) and potential RE and DSM/EE technologies/ applications that would possibly be financed. Development of training materials and monitoring and evaluation schemes will be part of the overall design of the capacity building program. The primary target group of trainees will be the local FIs that sign MOU(s) with the project. However, potential investors (community level businesses), RE and DSM/EE suppliers and other local FIs will also be invited to join to enhance their knowledge and interest in financing RE and EE in Samoa.

In addition, the project will focus on development of ad-hoc short-term training courses (which is categorized as non-formal learning in the SQA accreditation system). The training courses will cover both RE and EE technologies which are feasible for Samoa, including but not necessarily limited to solar, biogas, biomass, energy efficient lighting and energy efficient cooling and heating. The students enrolling in the training courses should have prerequisite courses in basic electrical or mechanical engineering. The training courses will be designed with practical learning and possible on-the-job trainings. During the design phase of the training course, review of various online courses related to RE and DSM/EE will be conducted, and the curriculum development will be carried out in close consultations with relevant stakeholders, such as PacTVET, NUS, USP, SQA, and MESC. It is anticipated that the graduates of these training courses will not only be able to support the RE/EE industry, but they should also be able to initiate new RE/EE businesses. Therefore, financial and economics of RE/ EE will be integrated in the training courses. The training courses will be institutionalized through USP and NUS. Both institutes express their interest in collaboration with the IMPRESS project during the project preparation phase. It should be noted that USP has an existing Vocational Training Centre in Samoa that can host the program. In addition, the USP staffs in Suva campus, Fiji, would be able to contribute to course design and training.

For the school level, basic knowledge of RE and DSM/EE technologies can be integrated into existing science subjects. This activity will consult MESC for possible integration of RE and DSM/EE learning units. These supplementary learning units for the existing science subjects will be developed focusing on basic knowledge of RE/ EE technologies. Considering that implementation of the school program on RE and DSM/EE technologies at the national level will require significant resources and strong commitment from MESC, the IMPRESS project will collaborate with MESC to pilot the proposed school program and lessons learned from the pilot phase will be used for the nationwide rollout.

Apart of the regular courses on RE and EE technologies involving design, engineering, financing, construction, operation and maintenance, a course 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 of RE-based power generation systems. This is to ensure that the knowledge from “Output 2.3.4: Capacity developed for EPC personnel in the optimum load dispatch of system power generation units” will be sustained.

Following completion of the training course design, a consultation with representatives from the education sector as well as RE/EE industry who are potential employers such as IPPs, EPC, and RE service providers will be conducted. Specific group discussion sessions will be included in the consultation to ensure the training courses will be able to address practical requirements from the industry. Findings from the discussions will be used to conclude the training design for universities and schools.

Results from the project will be disseminated within and beyond the project intervention zone through the One-Stop Service (OSS) website established by the project and through existing information sharing networks and forums.

B. Description of the consistency of the project with:

B.1 Consistency with National Priorities. *Describe the consistency of the project with national strategies and plans or reports and assessments under relevant conventions such as NAPAs, NAPs, ASGM NAPs, MIAs, NBSAPs, NCs, TNAs, NCSAs, NIPs, PRSPs, NPFE, BURs, INDCs, etc.:*

The IMPRESS project is consistent and is in line with key national policies, strategies and plans such as the following:

- National Energy Policy 2007, along with an associated Strategic Action Plan - All aspects of energy policy include RE and EE in the plan and a goal of 20% of all energy services to be supplied from renewable energy by 2030
- Energy Sector Plan 2012-2016 – This aims at supporting delivery of the Strategy for the Development of Samoa (SDS) 2012-2016 which has the vision to improve the quality of life of all citizens. RE and EE are the main components of the energy sector planning.
- National Infrastructure Strategic Plan (NISP) 2008-2018 - The 4 main initiatives include: a demand-side strategy; the development of clean energy resources through the establishment of a local Clean Energy Fund; the establishment of Samoa under the global CDM; and other RE generation including large on-grid solar.
- Greenhouse Gas Abatement Strategy 2008 – 2018 - Stated objectives are ‘Reduced GHG emissions from the electricity sector’ ‘Reduced GHG emission from replacing fossil fuel with biofuel’ and ‘Reduced GHG emissions through new sources of RE’.
- Samoa’s Intended Nationally Determined Contributions (INDC) submitted to UNFCCC in September 2015 states that Samoa is committed to reducing its GHG emissions from the electricity sub-sector through the adoption of a 100% renewable energy target for electricity generation in 2025. This is the same commitment stated in the country’s National Determined Contributions (NDC) that was submitted to the UNFCCC on 22 April 2016 after the country ratified the Paris Agreement.

C. DESCRIBE THE BUDGETED M & E PLAN:

The project monitoring and evaluation will be in accordance with the standard approach of UNDP and GEF and the following table summarizes the budget for the various monitoring & evaluation (M&E) activities that will be carried out to manage and gauge the effectiveness of the project implementation. The table also shows the parties responsible for each M&E activity and the time frame for each activity.

Mandatory GEF M&E Requirements and M&E Budget

GEF M&E requirements	Primary Responsibility	Indicative costs to be charged to the Project Budget ⁹ (US\$)		Time frame
		GEF grant	Co-financing	
Inception Workshop	UNDP Country Office	10,000	5,000	Within first four months of project start up
Inception Report	Project Manager	None	15,000	Within first four months of project start up
Standard UNDP monitoring and reporting requirements as outlined in the UNDP POPP	UNDP Country Office	None	None	Quarterly, annually
Monitoring of indicators in project results framework	Project Manager	Per year: 3,500	None	Annually
GEF Project Implementation Report (PIR)	Project Manager and UNDP Country Office and UNDP-GEF team	None	Per year: 3,000	Annually
NIM Audit as per UNDP audit policies	UNDP Country Office	Per year: 3,500		Annually or other frequency as per UNDP Audit policies
Lessons learned and knowledge generation	Project Manager	None	Per year: 6,000	Annually
Monitoring of environmental and social risks, and corresponding management plans as relevant	Project Manager UNDP CO	None	Per year: 3,000	On-going
Addressing environmental and social grievances	Project Manager UNDP Country Office BPPS as needed	None for time of project manager, and UNDP CO	Per year: 2,000	
Project Board meetings	Project Board UNDP Country Office Project Manager	None	Per year: 2,000	At minimum annually
Supervision missions	UNDP Country Office	None ¹⁰		Annually
Oversight missions	UNDP-GEF team	None ¹¹		Troubleshooting as needed
Knowledge management as outlined in Components 1 and 5	Project Manager	Included in Components 1 & 5 GEF budget		On-going
GEF Secretariat learning missions/site visits	UNDP Country Office and Project Manager and UNDP-GEF team	None		To be determined.
Mid-term GEF Tracking Tool to be updated by (MNRE&MOF)	Project Manager	None	6,000	Before mid-term review mission takes place.
Independent Mid-term Review (MTR) and management response	UNDP Country Office and Project team and UNDP-GEF team	50,000		At the mid-point of project implementation.

⁹ Excluding project team staff time and UNDP staff time and travel expenses.

¹⁰ The costs of UNDP Country Office and UNDP-GEF Unit's participation and time are charged to the GEF Agency Fee.

¹¹ The costs of UNDP Country Office and UNDP-GEF Unit's participation and time are charged to the GEF Agency Fee.

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GEF M&E requirements	Primary Responsibility	Indicative costs to be charged to the Project Budget ⁹ (US\$)		Time frame
		GEF grant	Co-financing	
Terminal GEF Tracking Tool to be updated by (MNRE&MOF)	Project Manager	None	6,000	Before terminal evaluation mission takes place
Independent Terminal Evaluation (TE) included in UNDP evaluation plan, and management response	UNDP Country Office and Project team and UNDP-GEF team	50,000		At least six months before the end of project implementation or six months after project conclusion
TOTAL indicative COST		145,000	112,000	

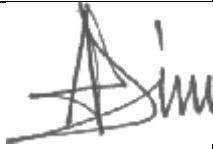
PART III: CERTIFICATION BY GEF PARTNER AGENCY(IES)

RECORD OF ENDORSEMENT OF GEF OPERATIONAL FOCAL POINT (S) ON BEHALF OF THE GOVERNMENT(S):

NAME	POSITION	MINISTRY	DATE
Suluimalo Amataga Penaia	Chief Executive Officer	Ministry of Natural Resources and Environment (MNRE)	29 July 2015

GEF Agency(ies) Certification

This request has been prepared in accordance with GEF policies¹² and procedures and meets the GEF criteria for CEO endorsement under GEF-6.

AGENCY COORDINATOR, AGENCY NAME	SIGNATURE	DATE	PROJECT CONTACT PERSON	TELEPHONE	E-MAIL ADDRESS
Adriana Dinu UNDP-GEF Executive Coordinator		June 14, 2017	Manuel L. Soriano Sr. Technical Advisor, UNDP- GEF EITT	+66-2-3049100 Ext 2720	manuel.soriano@undp.org

¹² GEF policies encompass all managed trust funds, namely: GEFTF, LDCF, SCCF and CBIT
GEF6 CEO Endorsement /Approval Template-August2016

ANNEX A: PROJECT RESULTS FRAMEWORK

This project will contribute to the following Sustainable Development Goal (s): <ul style="list-style-type: none">• 7. Affordable and Clean Energy – Ensure access to affordable, reliable, sustainable and modern energy for all.• 13. Climate Action – Take urgent action to combat climate change and its impacts by regulating emissions and promoting developments in renewable energy.						
This project will contribute to the following country outcome included in the UNDAF/Country Programme Document: <ul style="list-style-type: none">• Outcome Area 1: Environmental Management Climate Change and Disaster risk management – in support of an integrated approach to environmental sustainability and efforts by PICT governments and communities to adapt to climate change and reduce and manage disaster risk.• Outcome 1.1 By 2017 The most vulnerable communities across the PICTs are more resilient and select government agencies, civil society organizations and communities have enhanced capacity to apply integrated approaches to environment management, climate change adaptation/mitigation and disaster risk management.						
This project will be linked to the following output of the UNDP Strategic Plan: <ul style="list-style-type: none">• Outcome 1: Growth and development are inclusive and sustainable, incorporating productive capacities that create employment and livelihoods for the poor and excluded.• Outcome 5: Countries are able to reduce the likelihood of conflict, and lower the risk of natural resources, including from climate change.						
Strategy	Indicator	Baseline	Mid-term Target	End of Project Target	Source of Verification	Assumptions
OBJECTIVE: Improved sustainable and cost-effective utilization of indigenous renewable energy resources for energy production in Samoa	• Cumulative electricity generation using RE resources, GWh ¹³	• 82	• 259	• 438	<ul style="list-style-type: none">• Project activity reports• Project M&E reports• EPC annual report• Samoa Energy Review reports	<ul style="list-style-type: none">• The Samoan Government maintains interest and support of RE and EE for the country energy security and social and economic development.• Economic growth improves or at least remains constant
	• Cumulative GHG emission reduction, tCO2.	• 7,832	• 12,944	• 16,251		
	• Cumulative number of households ¹⁴ benefitting from RE-based electricity generation and EE technology applications	• 0	<ul style="list-style-type: none">• 1,370 HHs (RE-based power generation)• 6,840 HHs (EE appliances)	<ul style="list-style-type: none">• 2,740 HHs (RE-based power generation)• 13,700 HHs (EE appliances)		
COMPONENT 1: Enhancement of Renewable Energy Policy Formulation and Implementation						
OUTCOME :1 Enforcement of clear and consistent policies and regulations that are supportive of the development and implementation of RE-based power generation in support of national economic development	• Number of approved and enforced policies that support and incentivize investments in RE development and utilization.	• 0	• 1	• 1	<ul style="list-style-type: none">• Project activity reports• Project M&E reports• EPC annual report• Samoa Energy Review reports	<ul style="list-style-type: none">• The GOS maintains interest and support of RE and EE for country energy security and social and economic development.• The Energy Bill approved w/o major delay, and enforcement continued after the
	• Number of approved and enforced regulations that support EE implementation in Samoa under the Energy Bill	• 0	• 1	• 3		

¹³ From RE-based energy systems that are assisted with GEF resources during the IMPRESS Project implementation period.

¹⁴ Per 2016 estimated population of Samoa (194,523), the total number of households is 27,378 @ 7 people per HH (ADB, Samoa National Survey of Household Lighting and Electrical Appliances, March 2014).

						IMPRESS project implementation
COMPONENT 2: RE-based Energy System Improvements						
OUTCOME 2.1: Enhanced operating performance and reliability of RE power systems (generation and distribution) in major islands	• SAIDI ¹⁵ target, minutes	• 2,565	• 2,430	• 2,430	• EPC quarterly and annual report	• Commitment to RE integration into the electricity grids by EPC and the Samoan Government remain firm. • No significant interruption due to weather during the project period
	• SAIFI ¹⁶ target, number of occurrences	• 36	• 34	• 34		
OUTCOME 2.2: Increased application of biomass-based energy for power and non-power uses	• Number of biomass-based power generation units integrated into the EPC grid system	• 0	• 0	• At least 2	• Project activity reports • Project M&E reports • EPC quarterly and annual report • Samoa Energy Review reports	
	• Number of operational <u>off-grid</u> community biomass-based energy projects	• 0	• 2	• 4		
OUTCOME 2.3: Increased application of power system performance and reliability enhancement technologies	• Number of grid systems with increased reliability due to the effective application of system reliability enhancement technologies	• 0	• 0	• 1	• EPC quarterly and annual report	
COMPONENT 3: Financing of Initiatives for Electricity Saving, Productive and Social Uses of RE Electricity, and Electricity System Performance Improvement						
OUTCOME 3.1: Improved availability of, and access to, financing for electricity DSM, power/non-power RE application and electricity system performance improvement projects	• Number of banks/ financial institutions that implemented and funded the designed and endorsed financing models and schemes	• 0	• 2	• 2	• Project activity reports • Project M&E reports • EPC annual report • Samoa Energy Review reports	• Economic growth improves or at least remains constant

¹⁵ SAIDI = System Average Interruption Duration Index (in minutes); baseline and target indicators estimated based on 5% and 10% improvement of 2016 target of Upolu: SAIDI- 1300mins; Savaii: SAIDI –1400mins.

¹⁶ SAIFI = System Average Interruption Frequency Index (number of occurrences); baseline and target indicators estimated based on 5% and 10% improvement of 2016 target of Upolu: SAIFI –22 times, Savaii: SAIFI – 16 times.

OUTCOME 3.2: GoS & financial sector providing financing for EE, and productive uses of RE	<ul style="list-style-type: none">Total investments (in US\$) mobilized through the implemented financing schemes	<ul style="list-style-type: none">0	<ul style="list-style-type: none">355,000	<ul style="list-style-type: none">710,000		
	<ul style="list-style-type: none">Cumulative number of RE/EE projects supported by the implemented financing models	<ul style="list-style-type: none">0	<ul style="list-style-type: none">25 (RE Projects)165 (EE refrigerators)	<ul style="list-style-type: none">164¹⁷ (RE Projects)330 (EE refrigerators)		
COMPONENT 4: Productive & Social Uses of RE						
OUTCOME 4: Increased demand and utilization of RE for productive and social uses	<ul style="list-style-type: none">Number of businesses utilizing biomass-based energy for productive and social uses	<ul style="list-style-type: none">0	<ul style="list-style-type: none">0	<ul style="list-style-type: none">3	<ul style="list-style-type: none">Project activity reportsProject M&E reportsHousehold Income and Expenditure Survey (HIES)	<ul style="list-style-type: none">Prices of LPG for cooking and other heating applications remain at the current level or higher.
	<ul style="list-style-type: none">Percentage of household expenses on fuel in pilot communities	<ul style="list-style-type: none">5%¹⁸	<ul style="list-style-type: none">5%	<ul style="list-style-type: none">4%¹⁹		
COMPONENT 5: Enhancement of Awareness on the Applications and Benefits of RE/EE						
OUTCOME 5: Improved awareness about RE and EE technology applications to support national economic development	<ul style="list-style-type: none">Cumulative % of household utilizing low carbon (EE & RE) technologies	<ul style="list-style-type: none">N/A	<ul style="list-style-type: none">30% (5% RE; 25% EE)	<ul style="list-style-type: none">60% (10% RE; 50% EE)	<ul style="list-style-type: none">Awareness survey reportTraining evaluation reportsProject M&E report	
	<ul style="list-style-type: none">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.	<ul style="list-style-type: none">N/A	<ul style="list-style-type: none">10	<ul style="list-style-type: none">20		

¹⁷ 40 electoral districts and 3 potential projects per district

¹⁸ Average value from Household Income and Expenditure Survey 2014/2013, Samoa Bureau of Statistics

¹⁹ 20% reduction from the baseline value

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).

Responses to GEF Council Member (Germany) Comments 13 October 2015

Germany welcomes the project proposal from Samoa to reduce its GHG emissions from the energy sector through improvements to and expansion of its renewable energy generation systems. The national target to produce 100% of its electricity from renewable energy by 2017 is ambitious given the trend in recent years for decreasing shares of electricity provision from RE.

Comment	Response
<i>Regarding the incremental cost reasoning (1st paragraph) it remains unclear what is meant by the project helping to realize "potential for fossil fuel".</i>	The actual phrase is "...potential for fossil fuel and fossil fuel cost savings," (PIF, Part II, Sec. 1.4, Para 1., p. 14). What is meant is that, with just the ongoing and planned RE projects and activities of the Government of Samoa, the potential fossil fuel savings, and fossil fuel cost savings from the use of the country's indigenous RE resources (as fuel substitute) will not be realized.
<i>Samoa has submitted a conditional Intended Nationally determined contribution () which confirms the national target and in which Samoa commits to generate 100% of its electricity from renewable energy sources by 2025. It would be useful to illustrate how the proposed activities are related to achieving the INDC target.</i>	<p>Before PPG Exercise: Samoa's INDC is still being formulated. That activity is among the ongoing initiatives in the country that the project development team will coordinate with not only for exploring and possibly making use of potential synergies but for ensuring complementarities. During the project design and development stage (i.e., PPG exercise) the identification and design of activities to realize the %RE electricity target shall be in line with those stated in the finalized INDC report of Samoa.</p> <p>After PPG Exercise: Under Samoa's INDC, the country commits to generating 100% of its electricity from renewable energy sources by 2025. This is conditional on Samoa attaining this target in 2017 and receiving external assistance to maintain the contribution of renewable sources at 100% through to 2025. Guided by the country's INDC, and complementing and supplementing the ongoing and planned efforts of the country to enhance the utilization of RE resources for power generation and reducing GHG emissions, the project development team designed the proposed GEF Project to comprise of interventions that will facilitate the improved sustainability and cost-effectiveness of the utilization of indigenous renewable energy resources for energy production in Samoa. This takes a comprehensive holistic approach in addressing the identified policy and regulatory, financial, market, technical and informational barriers to the achievement of the set %RE target; as well as in expanding the operational and financial scope of the ongoing and planned RE projects in the country. The result of the project development work was the proposed project that endeavors to facilitate the realization of an alternative scenario that will bring the country towards the realization of its %RE electricity target.</p>
<i>The PIF provides contradicting information with regard to the</i>	Some clarification is warranted here. The urban population in Samoa accounts for 20% of the country population. Hence, 80% of

<p><i>percentage of population living in the capital and rural areas. It states that 76% of the population lives in the capital and then goes on to state that 80% of the population lives in rural areas.</i></p>	<p>the population is in rural areas. Apia, the capital city is in the island of Upolu. About 76% of Samoans live in Upolu. The latest census in the country shows that the population in Apia is 36,735, while for the entire country, it is 187,820, and that represents 19.6% of the country's population. The other major city Vaitele accounts for 0.4% of the Samoan population.</p>
<p><i>The section on risk management could be strengthened, as the risks for this project are, in part, substantial. For example, with regard to market barriers related to the small population and remoteness of the country from major markets: the national circumstances make the prospect of setting up RE systems production facilities and spare parts supply a major challenge. This is proposed to be addressed in component 4, however, the proposal is to assess the feasibility of setting up local production facilities. What is to happen if the feasibility study reveals that local production is not viable? Shouldn't such a feasibility study take place before the project starts? Why is this barrier not addressed in the risks section?</i></p>	<p><u>Before PPG Exercise:</u> To clarify, Component 4 does not propose specifically the assessment of the setting up of local production facilities, but the assessment of the feasibility of the establishment and operation of a local RET supply and service provision industry. This means local technical and engineering firms that can design, engineer, install/construct RET-based energy system projects, including the provision of technical services for the operation and maintenance of such systems. If there will be some production activities, this maybe in terms of the fabrication and supply of small components or simple replacement parts that are used in the repair and maintenance of RE-based energy systems. The conduct of market study on the establishment of a sustainable biomass fuel supply industry, perhaps can consider the small-to medium scale production and sales of processed fuels (briquettes, pellets, etc.) that can be used in households, and for supply to utility-based biomass-based power generation units.</p> <p>There have been previous studies done by the government regarding the viability and performance of the service industry in the country. The proposed feasibility study is mainly to verify further the conclusions from such studies and to focus specifically on the existing technical/engineering service providers in the country that could be potential RET supply and service provision entities. To ensure that such potential entities would be able to deliver such services, the project will also develop and implement a capacity development program for them on RE-based system design, engineering, financing, construction, operation and maintenance. In this regard, <u>it is not</u> expected that the enhancement of the existing technical/engineering service industry to provide services to RE-based energy system developers and operators, to be not viable.</p> <p>On the production of processed biomass fuels, the risks concerning the uncertainties in the continuous and reliable supply of biomass are included in the PIF (Part II, Sec. 4). These include: uncertain continuous supply of sustainable biomass feedstock; Not efficient transport of biomass feedstock to the power plant; and, Labor for feedstock harvesting is too costly for sustainable production.</p> <p>Counting on the expected successful implementation of the IMPRESS project, the resulting increased demand and utilization of RE-generated electricity for income/revenue generation activities and social services in the country, is expected to further ensure the viability and sustainability of such service industries.</p>

	<p>After PPG Exercise: The project design included the above pre-PPG exercise identified project activities. Component 4 has been designed to include activities that will enhance RE markets through the promotion and support of productive and social uses of RE at the community level. These activities will deliver multiple outputs that will contribute to the promotion of new business ideas focusing on the productive and social uses of RE and create jobs for the unemployed population, increase incomes and reduce expenses on fuel for households and businesses that will eventually lead to economic development of the country. These activities considered the previous studies on the viability and performance of the service industry in the country. The further verification of the conclusions from such studies. To ensure that the potential technical/engineering service providers in the country can deliver such services, Component 4 has been designed to include a capacity development program for them on RE-based system design, engineering, financing, construction, operation and maintenance.</p> <p>The design of the interventions to promote and demonstrate the cost-effective application of biomass for energy generation considered the barrier in regards to the limited use of domestic biomass resources for energy production. The design also considered the mitigation of the risks associated with the biomass feed supply such as: (1) Intermittent supply of biomass feedstock and additional transportation cost of biomass impacting viability of the biomass power plant; (2) Insufficient or poor handling of feedstock for biomass power generation; and, (3) Potential replication of the demo bio-gasification power plant may utilize different biomass resource. The proposed mitigation actions to address these risks are summarized in the Table in p. 82 of the Project Document (Nos. 6, 7 & 8).</p>
<p><i>Germany suggests discussing and considering the potential risk (which is not included in the risk section), that the increased demand for biomass may cause perverse incentives, i.e. a need for more biomass to fuel increasing demand for electricity through the upscaling efforts, plus an increase in transport emissions to move biomass around the islands.</i></p>	<p>Before PPG Exercise: The envisioned biomass-based energy generation units (power and non-power applications) that will be demonstrated under the proposed GEF project will mainly use coconut plantation waste (including those from the copra making process) as well as agricultural waste, and where feasible and abundantly available invasive plants are available. For the sake of fuel supply security, the biomass-based energy generation units will be located as much as possible within the vicinity of the biomass fuel source. This would involve installation of the relevant biomass processing and preparation facilities near or within the vicinity of the biomass-based energy generation units. The design of the entire value chain of the biomass-based energy systems shall consider 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>During the project design and development stage, the aspect of alleged unintended consequences of using biomass will be investigated in more detail. The utilization of coconut plantation waste (fronds, branches, husks, shells, etc.) does not result in land use change, since the use of woody biomass does not. Investing in forestry and woodland partly to produce feedstock for biomass energy generation does not lead to land use change because a woodland is not being replaced by a non-woodland. In regards the potential increased in emissions from the transport of biomass fuel, one way of preventing this is the siting of the biomass-based energy generation units within the vicinity of, or near, the biomass fuel source.</p> <p>After PPG Exercise: The project design was as envisioned during the PIF development stage. In addition, the sizing of the proposed power plant is based on the feedstock owned by STEC. The 2 main sources of biomass available in Samoa in sustainable and sufficiently large quantities include: wood biomass; and coconut shells and husks. The STEC plantation also has a large concentration of coconut shells and husk, and it was reported in August 2010 that the coconut processing produces around 45 tons (fresh) of husk and shell per week. Of this amount around 5 tons per weeks is being used for copra drying. The woody overgrowth biomass resource within the STEC plantation, which is made up of primarily invasive plant species, is estimated to be around 240,000 metric tons. These constitute 10 to 15 years of biomass resources for 500 kW gasifier. However, considering the other potential commercial uses of these biomass resources, replantation of the trees is required to sustain the continuous supply of biomass feed into the gasifier units. See also Footnote 44 of the Project Document. Since the bio-gasification plant is within the vicinity of the biomass resource, the risk of increased emissions from the transport of biomass fuel will be low.</p>
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Responses to GEFSec Comments (6 August 2015)

Comment & Response	Reference
1: Is the project aligned with the relevant GEF strategic objectives and results framework?	
<p><u>Comment (1):</u> Please revise Table A to indicate alignment with CCM Program 1.</p> <p><u>Response:</u> The PIF has been revised to reflect project alignment with CCM: Program 1.</p>	PIF: Part I, Sec. A
5: Are the components in Table B sound and sufficiently clear and appropriate to achieve project objectives and the GEBs?	
<p><u>Comment (1):</u> Please explain what technology envisaged for non-power RE-application (e.g. cooking).</p>	

<p><u>Response:</u> 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><u>Comment (2):</u> <i>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 merge these components if appropriate.</i></p> <p><u>Response:</u> 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 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 GOPNG 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.</p> <p>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 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>PIF: Part II, Sec. 1.3, Components 3 & 4</p>
<p><u>Comment (3):</u> <i>The study on social impact of RE of component 4 would be better to be included Component 1 to support policy development. Please revise.</i></p> <p><u>Response:</u> Agree. The suggested output has been moved to Component 1, as well as the output: <i>approved and enforced policies and IRRs in supporting the financing of projects on the productive and social uses of RE electricity.</i></p>	<p>PIF: Part II, Sec. 1.3, Component 1</p>
<p><u>Comment (4):</u> <i>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.</i></p>	

<p><u>Response:</u> 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>	<p>PIF: Part II, Sec. 7</p>
<p>7: Is the proposed Grant (including the Agency fee) within the resources available from The STAR allocation?</p>	
<p><u>Comment (1):</u> <i>The total amount of STAR allocation of Samoa is \$6817289, but the proposed project requested \$6,819,999 (project cost \$6,078,310 + agency fee \$577,439 + PPG \$150,000 + agency fee \$14250). Please revise the amount.</i></p> <p><u>Response:</u> 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\$ 5,786,500 • Project management cost = US\$ 289,328 • Total project cost = US\$ 6,075,828 • PPG request amount = US\$ 150,000 • Agency Fee = US\$ 591,454 (<i>Fee for FSP = US\$ 577,204; Fee for PPG = US\$ 14,250</i>) • 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>	<p>PIF: Part I: Project Information; Secs D & E</p>
<p><u>Comment (2):</u> <i>Please include Table D to show the requested fund and agency fee.</i></p> <p><u>Response:</u> The table in Part I, Sec. D has been included in the revised PIF.</p>	<p>PIF: Part I, Sec. D</p>

Responses to STAP Comments (26 September 2015)

Comment	Response
<p>Assessing the biomass resource potential and supply chains for power generation is good, but the heat market (in the PIF termed "non-power applications" though this is more domestic scale than commercial scale) should not be neglected (e.g. for drying, food processing, sterilising, water heating, etc)</p>	<p><u>Before PPG Exercise:</u> The scope of the biomass resource assessment in the IMPRESS project will include all sectors. The activities that will be developed under Component 4 of the project will also include the assessment of the feasibility of utilizing biomass for heat applications at the community level as well as establish and operationalize community-based business models for the implementation of biomass for heating applications, as part of productive and social uses of renewable energy.</p> <p><u>After PPG Exercise:</u> As was conceptualized during the PIF development stage, the IMPRESS Project has been designed to include Component 4: Productive & Social</p>

Comment	Response
	<p>Uses of RE, which is expected to enhance RE markets through the promotion and support of productive and social uses of RE at the community level. The expected outcome from this component is increased demand and utilization of RE for productive and social uses.</p>
<p>Integration of RE into the grid, linked with energy efficiency and demand side management (DSM) is complex as stated (page 8) but this is key to improving grid system performance and reliability where high shares of variable wind power and solar power exist in the mix. Dispatchable electricity from bioenergy and stored small hydro power can help make the grid more flexible. (Useful details can be found in the Integration chapter of the IPCC Special Report on Renewable Energy, (2011) (see http://srren.ipcc-wg3.de/report/IPCC_SRREN_Ch08.pdf).</p>	<p><u>Before PPG Exercise</u>: The proposed project will include demonstrations on the commercial development, planning, engineering and operation of biomass gasification power generation plants. It will also include the demonstration of the application of power system stabilization technologies in the EPC power grid system. This particular demo will build on the planned SCADA and power system stabilization project of the EPC. The proposed GEF project will involve integrating load management control features in the EPC SCADA system. Implementation of these envisioned demonstrations will serve as a capacity building program not only for EPC in Samoa but also for other state utilities in the Pacific Island countries.</p> <p><u>After PPG Exercise</u>: As was conceptualized during the PIF development stage, the IMPRESS Project has been designed to include interventions that will demonstrate and build capacity to the EPC the application of improved systems for grid system stabilization and optimum load dispatch.</p>
<p>The barriers to RE systems are clearly outlined. Here financial barriers are inclusive of both energy efficiency (EE) and RE uptake whereas policy, technical, market and information barriers are only related to RE. It is not clear why this is, given that EE is integral in increasing the uptake of RE.</p>	<p><u>Before PPG Exercise</u>: Agree on the fact that EE is integral in increasing the uptake of RE. The project strategy is to also enhance the EE in the use of electricity to reduce the demand, and in so doing also expedite the achievement of the country's %RE electricity target. Hence, the EE is also included among the interventions that will be implemented under the project. In the Project Document, the description and analysis of the barriers will cover those for both RE and EE.</p> <p><u>After PPG Exercise</u>: As was conceptualized during the PIF development stage, the IMPRESS Project has been designed to include interventions for improving the efficiency of utilizing energy to reduce the electricity demand. With reduced electricity demand, the achievement of the country's %RE electricity target can be expedited. The Project Document includes description and analysis of the barriers to the application of RE and EE technologies.</p>

Comment	Response
<p>Technical barriers for bioenergy are mainly due to a lack of local knowledge of the various conversion system options available with the choice partly depending on the local biomass resource. Gasification appears to be selected as a main option but many small gasifier plants have failed due to tar formation, high moisture content, poor comprehension of the technology etc. Will a proven design be imported? If so, sending samples of the local biomass for pre-testing before shipping through the plant would be warranted. Will the producer gas be used to fuel an internal combustion engine to power a generator? If so how will the gas be cleaned? There is a need to select the most appropriate technologies and scale to match the local situation. Overseas experience should be sought (such as through IEA Bioenergy http://www.ieabioenergy.com/).</p>	<p><u>Before PPG Exercise:</u> Properties of biomass for gasifier plants will be tested at the SROS testing center in Samoa before detailed engineering designs of the plants. It is envisioned that the procurement of the gasifier units will be carried out on an “Engineering, Procurement and Construction” contracting basis. That means all the detailed engineering designs of gasifiers, gas cleaning systems, gas engines and other systems will be the responsibility of the EPC contractor. These detailed engineering designs will be approved by the project proponent (MENR) before procurements of equipment and installation of these items are done. The suggestions provided by the reviewer are very much welcome and will be recommended to the bio-gasification demo project host (STEC) and EPC contractor during the design of the demo plant.</p> <p><u>After PPG Exercise:</u> The proposed actions that were suggested before the PPG Exercise are by and large the same that the project design team considered in coming up with the conceptual design of the bio-gasification power plant. These will be the same recommendations to be included in the TOR for the selection of the qualified contractor that will design and implement the demo on an “Engineering, Procurement and Construction” contract basis.</p>
<p>In many ways the aim to develop and integrate more bioenergy power generation is ambitious. The challenge of developing a reliable biomass supply system is seen as a moderate risk (page 18). It should not be under-estimated and suitably experienced personnel will need to be employed, as well as local training undertaken. The private sector will also need to be involved, for example with the collection, storage and transport of relatively large volumes of biomass. These are not included in the PIF. Will organic wastes be included, such as MSW or sewage sludge? What optimum moisture content is desired? How can nutrients removed in the biomass be recycled back to the soil?</p>	<p><u>Before PPG Exercise:</u> The biomass-based power generation technology application in the IMPRESS project will be based on biomass feedstock owned by STEC, which is a quasi-private sector entity that will be the biogasification plant demonstration host. The proposed arrangement will help mitigate the risk pertaining to the biomass supply. Organic waste is not included as feedstock for this biogasification power generation. However, such waste will be used in the other demonstrations focusing on biogas generation, recovery and utilization in rural areas. The available organic waste (e.g., agro-waste and livestock waste) will be used in biodigesters for generating biogas that will be used for non-power applications. Slurry from biodigesters will be used as fertilizers in agriculture fields. Details concerning the questions asked will be answered during the preliminary design of the biogas demos during the PPG stage and during the detailed design that will precede the biogas demo.</p>

Comment	Response
	<p><u>After PPG Exercise:</u> 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 biodigesters for generating biogas that will be used for non-power applications. Slurry from biodigesters will be used as fertilizers in agriculture fields. Refer to Annex K for the proposed design of the biomass-based energy generation demonstrations (power and non-power applications).</p>
<p>The risk from natural disasters and potential adverse climate events is rated "low" in this project proposal; however, in Samoa's National Adaptation Plan (NAP) to the UNFCCC (http://unfccc.int/resource/docs/napa/sam01.pdf) and elsewhere, many sectors are highlighted as extremely vulnerable including infrastructure, which will add substantially to the cost of new construction. Given that many CC Adaption projects have been implemented in Samoa and the region at large, it seems there should be some connection made between this proposed effort and the numerous GEF-funded adaptation projects in order to specifically state how the risks will be mitigated. What type of systems or safeguards have the previous GEF-funded projects put in place?</p>	<p><u>Before PPG Exercise:</u> Previous GEF projects on climate change adaptation in Samoa have been mainly to strengthen the local capacity for climate-resilient development, particularly for national development planning. One very significant system that the country has developed and installed is a Climate Early Warning System (CLEW), which include among others the upgrading and extension of the climate station networks of the country.</p> <p>In line with increased resiliency to extreme climate events, facilities that will house various RE and DSM/EE technology demonstrations under the IMPRESS Project will be designed and constructed with due consideration of the measures that have been identified to address risks from natural disasters and potential adverse climate events in Samoa. Apart from the required knowledge and skills in applying best practice engineering and occupational health, safety, and environments (OSHE) practices, the EPC contractor will have to be knowledgeable of the application of best practice designs and construction arrangements that will enable the installed systems and structures withstand the anticipated types of climate events of disasters (both natural and man-made) in Samoa.</p> <p><u>After PPG Exercise:</u> The proposed actions that were suggested before the PPG Exercise are by and large the same that the project design team considered in the project risk analysis.</p>
<p>With respect to Knowledge Management, how will information from this project relate</p>	<p><u>Before PPG Exercise:</u> The knowledge management aspects of the IMPRESS project will be implemented in</p>

Comment	Response
<p>to existing knowledge centres for the region such as SPREP (Secretariat of the Pacific Regional Environment Program) and the newly created Pacific Climate Change Portal (http://www.pacificclimatechange.net/)? Or the Clean Energy Information Portal “REEGLE” - (http://www.reegle.info/index.php?)</p>	<p>collaboration with the regional project, entitled the Pacific Technical and Vocational Education and Training in Sustainable Energy and Climate Change Adaptation (PacTVET) project funded by EU and the Government of Samoa. Lessons learned from other RE/EE projects in the region will be taken into account in the design of the demonstrations. And in return, relevant knowledge generated, lessons learned and best practices produced by the project (particularly from the demonstrations) will be shared with SPREP and the newly created Pacific Climate Change portal.</p> <p><u>After PPG Exercise:</u> The proposed actions that were suggested before the PPG Exercise are by and large the same that the project design team considered in the knowledge management aspect of the project.</p>

ANNEX C: STATUS OF IMPLEMENTATION OF PROJECT PREPARATION ACTIVITIES AND THE USE OF FUNDS²⁰

A. Provide detailed funding amount of the PPG activities financing status in the table below:

PPG Grant Approved at PIF: USD 150,000			
<i>Project Preparation Activities Implemented</i>	<i>GETF/LDCF/SCCF/CBIT Amount (\$)</i>		
	<i>Budgeted Amount</i>	<i>Amount Spent To date</i>	<i>Amount Committed</i>
Baseline analysis of the regulatory, policy and institutional issue of RE based power generation	25,000	25,000	0
Stake holder analysis and capacity needs assessment	20,000	20,000	0
Documentation of feasible RE power generation and review of existing RE data	25,000	17,835	7,165
Logical Framework analysis, proceeding of LFA workshop	25,000	972	24,028
Detailed design of project components and activities	20,000	0	20,000
Preparation of UNDP-GEF Project Document (ProDoc) and GEF CEO Endorsement Request (CER) Document	17,500	0	17,500
Finalization of ProDoc and CER Document	17,500	0	17,500
Total	150,000	63,807	86,193

Overall, the objective of the PPG exercise was achieved with the successful implementation of the planned activities for the design, development and preparation of the IMPRESS Project. The project development team (PDT) that was created by the implementing partner, MNRE, carried out the PPG Exercise based on the agreed project initiation plan. The PDT was able to gather and organize the relevant data and information that were used in the design of the various project activities. Information about the ongoing and planned programs of the Samoan government, as well as private sector entities that are interested, in RE-based power generation were gathered, processed and analyzed to obtain a clear understanding of the current situation concerning the issues and concerns regarding the %RE electricity target of the country. Plans and programs of the country in line with its electrification program and its NDCs were also researched and reviewed. The discussions with the key stakeholders and project partners have made possible the identification of relevant issues and barriers that need to be addressed and considered in the development and implementation of the IMPRESS Project. The MNRE, relevant private sector entities, and RE technology experts (e.g., YWAM) in the country were engaged in intensive discussions for the project development team to fully understand the nature and extent of these issues/barriers. The logical framework analysis (LFA) that was carried out by the PDT together with the stakeholders was mainly to verify and confirm the project results framework that was developed and presented during the PIF stage of the project development. Practically the LFA confirmed the previously defined project goal and objective, and expected outcomes. Discussions with the STEC and other IPPs, particularly regarding their technical capacity development needs, and other technological and business concerns became the basis of the demonstrations and specific technical assistance in various aspects of the design, engineering and

²⁰ If at CEO Endorsement, the PPG activities have not been completed and there is a balance of unspent fund, Agencies can continue to 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. Agencies should also report closing of PPG to Trustee in its Quarterly Report.
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installation of RE-based energy systems both for power and non-power applications. The discussions with the stakeholders and project partners also resulted in getting commitments for the co-financing of the baseline activities that were subsumed into the project; the government's contribution to the funding of some of the incremental activities, as well as in the agreed project coordination schemes and the project implementation arrangements. The outputs of the PPG exercise were used in the detailed design of the IMPRESS project components and the relevant activities that will deliver the necessary outputs that will collectively realize the expected outcomes of this GEF-funded climate change mitigation project of Samoa.

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

Provide a calendar of expected reflows to the GEF/LDCF/SCCF/CBIT Trust Funds or to your Agency (and/or revolving fund that will be set up): N/A