



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: Green Energy SMEs Development Project			
Country(ies):	Tajikistan	GEF Project ID:1	9191
GEF Agency(ies):	UNDP	GEF Agency Project ID:	5476
Other Executing Partner(s):	Ministry of Energy and Water Resources	Submission Date:	January 10, 2018
GEF Focal Area (s):	Climate Change	Project Duration (Months)	60 months
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	N/A	Agency Fee (\$)	239,396

A. FOCAL AREA STRATEGY FRAMEWORK AND OTHER PROGRAM STRATEGIES²

Focal Area Objectives/Programs	Focal Area Outcomes	Trust Fund	(in \$)	
			GEF Project Financing	Co-financing
CCM-1 Program 2	Outcome B. Policy, planning and regulatory frameworks foster accelerated low GHG development and emissions mitigation (Indicator 5. Degree of support for low GHG development in the policy, planning and regulatory framework) Outcome C. Financial mechanisms to support GHG reductions are demonstrated and operationalized (Indicator 6. Degree of strength of financial and market mechanisms for low GHG development)	GEFTF	2,519,963	21,950,000
Total project costs			2,519,963	21,950,000

B. PROJECT DESCRIPTION SUMMARY

Project Objective: Identify, support and promote scalable, private sector-led business models for provision of affordable and sustainable energy products and services for Tajikistan's rural population						
Project Components/Programs	Financing Type ³	Project Outcomes	Project Outputs	Trust Fund	(in \$)	
					GEF Project Financing	Confirmed Co-financing
Component 1: Enabling policy and regulatory framework and capacity development for green energy SMEs	TA	1.1 Conducive policy and regulatory framework for green energy SMEs	1.1 Policies and regulations promoting wider adoption of EE/RE technologies by end-users developed 1.2 Financial incentives and support mechanisms for green energy investment designed [target: \$30,000,000 in the form of private	GEFTF	386,750	100,000

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.

			investment leveraged and 2 MW of new decentralized RES-based power capacity provided] 1.3 Performance standards for PV and SWH products developed and MVE designed			
Component 2: Access to finance for green energy SMEs and/or energy service users	Inv	2.1 Improved access to finance for green energy products and service user [target: 16,000 beneficiaries using RE, including over 10,000 women]	2.1 Micro-financing products developed and introduced by MFIs [target: 2,000 loans / US\$ 2,600,000, including at least 100 women-led SMEs with approved green loans for SWH and other targeted EE/RE products]	GEFTF	535,090	11,700,000
	TA		2.2 MFIs trained to implement and monitor performance of new products	GEFTF	130,410	150,000
Component 3: Business models for green energy SME	TA	3.1 New business models and approaches enabling green energy product/services delivery implemented [target: lifetime RE production per technology of 15,330 MWh solar PV and 43,800 MWh small hydro; target: 2,000 households/17,000 individuals including over 10,700 women]	3.1 RESCO Business Model for off-grid communities piloted and replicated [target: scalable model identified and implemented for up to 0.75 MW of new RES-based power] 3.2 Facilitation approach to support investment in SWH by tourism facilities demonstrated [target: a 5,000 m ² of SWH installed] 3.3. Marketing and awareness raising campaign on green energy conducted	GEFTF	467,750	500,000
	Inv			GEFTF	740,000	8,467,000
Component 4: Knowledge Management and M&E	TA	4.1 Project experience, results and lessons learned are systematically monitored, assessed, codified and disseminated	4.1 Project results assessed, including achieved GHG emission reductions and socio-economic benefits, and made publicly available 4.2 Independent mid-term review and final evaluation conducted	GEFTF	140,000	83,000
Subtotal					2,400,000	21,000,000
Project Management Cost (PMC) (DPC is 119,963) ⁴				GEFTF	119,963	950,000
Total project costs					2,519,963	21,950,000

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.

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 (\$)
Recipient Government	Ministry of Energy and Water Resources	In-kind	500,000
Recipient Government	Ministry of Finance*	Loans	10,000,000
GEF Agency	UNDP	Grant	4,300,000
Private Sector	Pamir Energy	Equity	5,000,000
Beneficiaries	Micro-credit Organization Arvand	Loans	1,500,000
Beneficiaries	Micro-credit Organization Mehnatobod	Loans	200,000
Beneficiaries	Micro-credit Organization Sarvati Vakhsh	Loans	150,000
Private Sector	Systemavtomatika	In-kind	100,000
CSO	55 Group	In-kind	200,000
Total Co-financing			21,950,000

*In its capacity of ADB project implementing agency

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	GEF TF	Tajikistan	Climate Change (under FLEX mechanism)	N/a	2,519,963	239,396	2,759,359
Total Grant Resources					2,519,963	239,396	2,759,359

a) Refer to the Fee Policy for GEF Partner Agencies

E. PROJECT'S TARGET CONTRIBUTIONS TO GLOBAL ENVIRONMENTAL BENEFITS⁵

Provide the expected project targets as appropriate.

Corporate Results	Replenishment Targets	Project Targets
1. Maintain globally significant biodiversity and the ecosystem goods and services that it provides to society	Improved management of landscapes and seascapes covering 300 million hectares	<i>hectares</i>
2. Sustainable land management in production systems (agriculture, rangelands, and forest landscapes)	120 million hectares under sustainable land management	<i>hectares</i>
3. Promotion of collective management of transboundary water systems and implementation of the full range of policy, legal, and institutional reforms and investments contributing to sustainable use and maintenance of ecosystem services	Water-food-ecosystems security and conjunctive management of surface and groundwater in at least 10 freshwater basins;	<i>Number of freshwater basins</i>
	20% of globally over-exploited fisheries (by volume) moved to more sustainable levels	<i>Percent of fisheries, by volume</i>
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)	<i>0.053 million tCO_{2eq} – direct; between 0.301 and 1.012 million tCO_{2eq} –</i>

⁵ 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.

		<i>consequential (average 0.657 million tCO_{2eq})</i>
5. Increase in phase-out, disposal and reduction of releases of POPs, ODS, mercury and other chemicals of global concern	Disposal of 80,000 tons of POPs (PCB, obsolete pesticides)	<i>metric tons</i>
	Reduction of 1000 tons of Mercury	<i>metric tons</i>
	Phase-out of 303.44 tons of ODP (HCFC)	<i>ODP tons</i>
6. Enhance capacity of countries to implement MEAs (multilateral environmental agreements) and mainstream into national and sub-national policy, planning financial and legal frameworks	Development and sectoral planning frameworks integrate measurable targets drawn from the MEAs in at least 10 countries	<i>Number of Countries:</i>
	Functional environmental information systems are established to support decision-making in at least 10 countries	<i>Number of Countries:</i>

F. DOES THE PROJECT INCLUDE A “NON-GRANT” INSTRUMENT? **NO** (If non-grant instruments are used, provide cative 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) Global environmental problems, root causes and barriers that need to be addressed

There have been no changes in alignment with the original PIF. A more detailed description of the global environmental and sustainable development problems related to energy access in Tajikistan, and a description of barriers to green energy market growth, have been provided in the UNDP Project Document, as follows:

- Section II presents brief overview of environmental and development challenges to be addressed
- Table 1 summarizes the demand and supply-side barriers to green market growth
- Technical Annex I provides detailed analysis of the energy, development and environmental challenges in Tajikistan.

2) Baseline scenario or any associated baseline projects

The baseline scenario and the description of associated baseline projects have been updated in the UNDP Project Document Section II. Key changes and updates are:

- EU/GIZ Sustainable Energy Programme for Central Asia (CASEP) has been completed since the PIF was approved and, therefore, is excluded from the list of baseline initiatives. However, a new GIZ project “*Value Chain Development in the Energy Efficiency Housing and Construction Sector, Tajikistan*” is about to start and will be complementary to the GEF support under Component 1.
- ADB’s “*Access to Green Finance Project*” is nearing completion, but the Ministry of Finance will continue managing accumulated reflows and support MFIs through the established Project Implementation Unit (PIU). Collaboration with the GEF project will be established under Component 2.
- UNDP-supported Community Programme (CP) continues investment in rural area-based community development through the next phase of the *Livelihood Improvement in Tajikistan-Afghanistan Cross-border Areas (LITACA)* project. Collaboration with these initiatives will be established to support replication of RESCO model under Component 3. Also, UNDP continues working with MFIs through capacity building and investment support within

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.

the framework of the new *Aide for Trade* project, which will provide baseline co-financing for Component 2 along with partner MFIs.

3) Proposed alternative scenario, GEF focal area⁷ strategies, with a brief description of expected outcomes and components of the project.

Modifications to the proposed alternative scenario and to the description of the expected outcomes and components have been made, reflecting findings and results from the PPG phase, including the market assessment and stakeholder consultations. These modifications are described and justified in the table below.

Project design element	Original PIF	Modifications proposed at CEO Endorsement	Justification
Objective-level		No change	
Component-level	Component 3 “RESCO business models for green energy SMEs”	Component 3 “ RESCO Business models for green energy SMEs”	The project will support innovative models, such as RESCO under Component 3. However, stakeholder consultation and market assessment conducted during the PPG identified the need to promote and facilitate other, more traditional business models for green energy products/ services. Therefore, the scope of work under this Component has been expanded to cover a range of potential business models in addition to RESCO.
		New Component 4 “Knowledge management and M&E”	A new Component has been added in line with recent GEF guidance and practices to have a stand-alone knowledge management and M&E component to ensure that project results and benefits are assessed, documented and made publicly available.
Outcome-level	Outcome 1.1 Technical capacities, know-how and entrepreneurship opportunities for green energy products and services	Outcome 1.1 has been merged within Outcome 3.1 “New business models and approaches enabling green energy product/services delivery implemented”	The technical capacities of green energy SMEs are more logically addressed through learning-by-doing (e.g. in the context of and along with RESCO model development and implementation) and other market/product facilitation activities to be undertaken under Component 3, since “technical capacities and know-how” is an integral part of RESCO’s business model. Component 1, however, is aimed at supporting relevant authorities to design and implement policies and regulations and will not directly support SMEs.
	Outcome 2.1 Improved access to equity investment and affordable loans for green energy SMEs and/or energy service users	Outcome 2.1 Improved access to equity investment and affordable loans for green energy SMEs and/or energy service users	The initial intent to focus both on equity (through crowdfunding) and loan finance has not been validated during the Project preparation phase for several reasons. While the MFI sector is very strong and well-developed in Tajikistan, representing a strong baseline for the proposed project to build on, equity investment through crowdfunding has not been particularly successful or even adequately tested. Some initial attempts to use crowdfunding to secure grants for green energy project have been made; however, at very limited scale and with very high transaction costs. Indeed, during project design it was firmly established that Tajik SMEs are neither experienced with nor willing to attract equity financing: their preferred models are either self-financing or debt. Self-financing is the only form of financing Tajik SMEs are currently using and their ability to raise additional equity was not identified as a barrier by companies. In view of this better understanding of the context, is recommended that the “equity” investment component be removed from the scope of this outcome.

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..

Project design element	Original PIF	Modifications proposed at CEO Endorsement	Justification
	Outcome 3.1 Improved access to sustainable energy services in remote rural areas: at least 400 households/ 2,000 people	Outcome 3.1 ¹¹ New business models and approaches enabling green energy product/services delivery implemented	The proposed change in the wording of the Outcome is intended to better reflect the expected outcome of this particular component, i.e. design and implementation of new business models for green energy products/service delivery (which is also the objective of the project). The envisaged impact of this work (i.e. improved access to energy in remote rural communities) will actually be bigger than envisaged at PIF approval (i.e. over 17,000 people will benefit as compared to 2,000 in the original PIF). The indicator reflecting the expected impact – “Number of people with improved access to energy (including share of women)” – and the related targets (4,000 at mid-term and 17,687 by project end) have been included in the project results framework (Annex A).
		New Outcome 3.3 “Marketing and awareness raising campaign on green energy conducted” has been added	Based on unanimous stakeholders’ recommendations, an outcome has been added related to strengthening the public’s knowledge and awareness about green energy solutions, as an enabler for creating demand for green energy products and services.

4) Incremental/additional cost reasoning and expected contributions from the baseline, the GEFTE, LDCF, SCCF, CBIT and co-financing.

Barriers, gaps and challenges to green energy market growth in Tajikistan are presented in the Table 1 of the UNDP Project Document. The table below explains how those barriers will be addressed in the baseline and GEF alternative scenarios, and specifies the expected contribution of the project to baseline and its incremental reasoning.

Description of gap or barrier	Baseline	Alternative Scenario (incremental reasoning)
<i>Barrier 1: Weak policy and regulatory framework for green energy market</i>		
• Framework laws on EE and RE do exist and provide good basis for EE and RE market development. However, their systematic implementation is lacking, in particular the development of a number of important by-laws and regulations	EE and RE laws will remain in place but, without regulatory framework and by-laws, implementation will be limited. In particular, without mandatory EE and RE provisions, demand for green energy products will not materialize. Financial support mechanism, as envisaged in the EE Law, will not be operational. Low-quality EE/RE products will continue undermining consumers’ confidence in the technology	<p>Policies and regulations promoting wider adoption of EE and RE technologies by end-users developed</p> <p>Financial incentives and support mechanisms for green energy designed</p> <p>Performance standards for PV and SWH products developed, and MVE designed</p>
<i>Barrier 2: Low ability to pay and unattractive financing terms for green energy</i>		
• High upfront costs of EE/RE products and high interest rate on green energy loans	The ADB and the EBRD will support local MFIs in structuring green energy finance for consumers. However, the terms (in particular high interest rates 22-25%) will remain unattractive, in particular for technologies such as solar-based applications, which require higher payback to break even	<p>Output 2.1: Standard micro-financing products developed and introduced by MFIs. GEF support will enable MFI to offer loans at affordable terms (15%)</p> <p>Output 2.2: MFIs trained to implement and monitor performance of new products</p>

Description of gap or barrier	Baseline	Alternative Scenario (incremental reasoning)
Barrier 3: Under-developed supply chain and lack of business models for EE/RE products and services		
• Limited technical, financial and administrative capacities of green energy SMEs to structure and carry on investment and/or effectively promote and deliver their products/services to clients	Investment in off-grid rural electrification projects will continue on a limited basis and only with public support (donors and government) without private sector involvement	Output 3.1: RESCO Business Model for off-grid communities piloted and replicated
Barrier 4: Limited knowledge about green energy products and their benefits among consumers		
• Potential green energy end-users have very limited access to knowledge and information about existing solutions and their benefits for their business and/or households.	Consumer awareness and, consequently, demand will remain limited even for most cost-effective products	Output 3.2: Facilitation approach to support investment in SWH by tourism facilities demonstrated (product facilitation) Output 4.1 Marketing and awareness raising campaign on green energy conducted (market facilitation)

No significant changes to the co-financing have been made compared to the information presented in the PIF. Changes in the distribution of project funds between components are summarized in the Table below.

Project component	At PIF (US\$)	At CEO Endorsement (US\$)	Explanation
Component 1: Enabling policy and regulatory framework and capacity development for green energy SMEs	500,000	386,750	PR and advocacy work originally budgeted under Component 1 has been moved to Component 3
Component 2: Access to finance for green energy SMEs and/or energy service users	100,000	130,410	The need for TA support to MFIs have been found to be higher than estimated at PIF
	500,000	535,090	Correction has been made in line with financial model underpinning financial support mechanism
Component 3: Business models for green energy SME	350,000	467,750	Budget increase since public relations/advocacy work is now covered under Component 3 (instead of Component 1)
	950,000	740,000	Budget has been reduced due to increased need for assistance under Component 2 and new M&E
Component 4: Knowledge Management and M&E	N/a	140,000	New component, not budgeted at PIF
PM	119,963	119,963	No changes
TOTAL	2,519,963	2,519,963	No changes

5) Global environmental benefits (GEFTF) and/or adaptation benefits (LDCF/SCCF)

The UNDP Project Document elaborates the global environmental benefits including methodology, calculations and targets in Section IV 'Feasibility'. Targets for global environmental benefits are provided in the Project Document Section VI, 'Project Results Framework' and in the GEF CCM Tracking Tool (Annex D). The methodology and model to assess the global environmental benefits of the project are provided in Technical Annex III to the UNDP Project Document.

At PIF approval, direct GHG emissions reductions were estimated as 69,125 tCO_{2e} and in the range of 525,000 tCO_{2e} (bottom-up) to 924,000 tCO₂ (top-down) for consequential emissions. However, at CEO Endorsement, more conservative and realistic assumptions were made regarding expected project impacts, hence the estimated direct GHG emission reductions are slightly lower than originally estimated (see table below).

GHG emissions reductions (tCO ₂)	2017-2022	2023-2033
Direct	53,000	
Consequential (bottom-up)		301,000
Consequential (top-down)		1,012,000

6) Innovativeness, sustainability and potential for scaling up

Innovativeness

The Project's design involves several innovative elements, such as piloting the RESCO business model for decentralized provision of green energy services for the first time in Tajikistan (and in Central Asia); implementing a product and market facilitation approach for targeted green energy products (SWH); and engaging the local MFI sector in green energy financing. None of the above models alone can address all risks associated with green energy market, however, taken together and in combination with other "classical" policy de-risking instruments under Component 1, they offer an integrated package of innovative and scalable solutions aimed at removing barriers and improving the risk/reward profile of green energy investment in Tajikistan.

Sustainability

By addressing key risks and the underlying barriers that impede the development of the green energy market in Tajikistan, a sustainable business will be created. The key element of the Project's sustainability is its focus on the private sector as a driving force both on the supply and demand side of the green energy market. The project will help unleash the demand for green energy solutions by promoting policies mandating implementation of such technologies in new buildings (Component 1); introducing affordable loan finance for consumers of green energy technology and products (Component 2); and raising awareness and supporting potential clients in tourism and other service sectors where deployment of green energy solutions, in particular SWH, represents a very cost-effective investment opportunities (Component 3). On the supply side, project's sustainability will be ensured via favorable tax, custom and other incentives for GE suppliers (Component 1), as well as appropriate service delivery models (RESCOs) which enable private investment in GE solutions in remote/off-grid locations.

Potential for scaling-up

There is a large potential for scaling-up market-based provision of green energy products and services in Tajikistan. With unmet annual demand in energy currently in the range of 2,700 to 4,000 GWh/year, and its projected increase by 7,000 GWh/year by 2020, project-supported business models and solutions can grow and expand many-fold subject to the effective removal of underlying barriers to private sector equity and debt investors in this sector. The Project will do so by supporting the identification and piloting of scalable private-sector business models because efficient and effective deployment of proven energy access solutions is a key business capability. By leveraging this capability, the project will accelerate the rate at which access to energy is improved for thousands of un-served Tajik customers.

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

No

A.3. Stakeholders. *Identify key stakeholders and elaborate on how the key stakeholders engagement is incorporated in the preparation and implementation of the project. Do they include civil society organizations (yes X /no ☐)? and indigenous peoples (yes X /no ☐)?*⁸

⁸ As per the GEF-6 Corporate Results Framework in the GEF Programming Directions and GEF-6 Gender Core Indicators in the Gender Equality Action Plan, provide information on these specific indicators on stakeholders (including civil society organization and indigenous peoples) and gender.

During project preparation, a stakeholder analysis identified key stakeholders, and assessed their prospective roles and responsibilities in the context of the Project. The consultation workshop that presented the project design involved 25 representatives of green energy SMEs, MFIs and CSOs.

CSOs - The following organizations have been consulted and are willing to collaborate with the Project during implementation:

- “Association of Energy Sector Professionals” – a leading Tajik NGO dealing with energy issues – has been consulted and will be involved regarding the enabling policies and regulations under Component 1
- Local NGO “Youth Ecological Center” (Group 55), French NGO «GERES», German “AgroAction” and Italian “CESVI” are all active in promoting the use of renewable energy and energy efficiency in Tajikistan, and will be important project partners for delivery of Components 3 and 4 related to market awareness and knowledge exchange
- “Village Organizations”, set up by the Aga Khan Foundation in mountainous Badakhshan region, is a network of over 1,200 independent Village Organisations (VO) dealing with institutional development at the community level, such as local development planning, management capacity building and promotion of good governance. VO, active in the project target areas, will be involved in the implementation of Component 3 (operationalization of RESCO model).

Indigenous people - There are no "indigenous people" as such in Tajikistan, as defined by international conventions and protocols. However, the project will specifically target Pamiri Tajiks, a minority group living in the Gorno-Badakhshan Autonomous Province of Tajikistan (GBAO). Under Component 3 (Output 3.1), all beneficiaries will be Pamiri Tajiks, i.e. 250 households/900 people (or 0.05% of the entire Pamiri Tajik population), who will directly benefit from the Project.

The choice of Pamiri Tajiks as the primary beneficiary group for the Project has been made based on a number of considerations. First, it is the region with highest number of off-grid communities where provision of centralized (through grid expansion) energy services is not viable. Second, the Government of Tajikistan specifically requested that UNDP consider and prioritize the interests of Pamiri Tajik, as the minority population group, in this project. Third, Pamir Energy LLC is the only existing private IPP with sufficient managerial and financial capacity to implement and carry out such a complex investment.

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. In addition, 1) did the project conduct a gender analysis during project preparation (yes X/no ☐)?; 2) did the project incorporate a gender responsive project results framework, including sex-disaggregated indicators (yes X/no ☐)?; and 3) what is the share of women and men direct beneficiaries (women 60%, men 40%)?*⁹

Consistent with what was noted in the PIF, the gender analysis conducted during project development identified areas where gender equality and women's empowerment issues can be mainstreamed in the project's design, implementation and monitoring. The UNDP Project Document summarizes how the project is mainstreaming gender (Section III. 'Results and Partnerships', Section iv 'Mainstreaming gender') and Annex H provides the 'Gender assessment and action plan'.

The Project Results Framework (Annex A) is gender responsive and includes:

- gender-specific activities, such as working to maximize women's participation in capacity-development training
- targets for women's participation in capacity building
- awareness-raising strategies that will take into account the differentiated needs of men and women regarding green energy
- project's monitoring and evaluation budget supporting the collection of gender-disaggregated data.

⁹ Same as footnote 8 above.

The project will monitor the share of women and men who are direct project beneficiaries, and it will also monitor the nature of these benefits.

Project targets and activities will be monitored in project reporting, both in annual reports and in the mid-term review and the terminal evaluation.

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 Project risk matrix is presented in the Section V.ii of the UNDP Project Document.

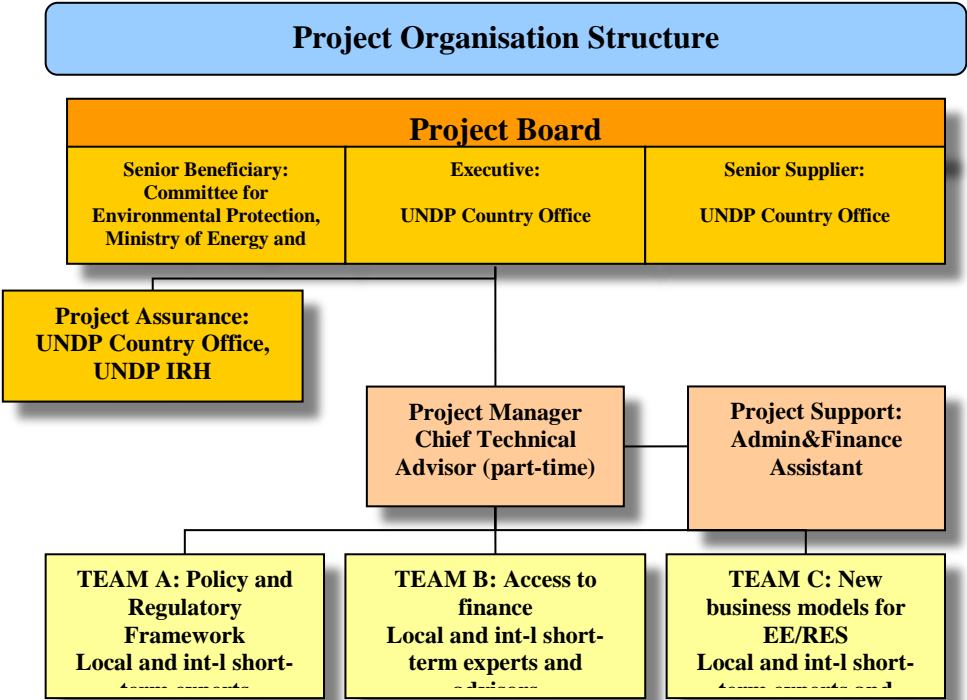
A.6. Institutional Arrangement and Coordination. Describe the institutional arrangement for project implementation. Elaborate on the planned coordination with other relevant GEF-financed projects and other initiatives.

Institutional arrangement

The project will be implemented following UNDP’s Direct Implementation Modality (DIM), in line with Standard Basic Assistance Agreement between the Government of Tajikistan and the United Nations Development Program (UNDP) signed by the parties on 1 October 1993. The Implementing Partner for this project is UNDP. The Implementing Partner is responsible and accountable for managing this project, including the monitoring and evaluation of project interventions, achieving project outcomes, and for the effective use of UNDP resources. The Implementing Partner is responsible for:

- Approving and signing the multiyear workplan;
- Approving and signing the combined delivery report at the end of the year; and,
- Signing the financial report or the funding authorization and certificate of expenditures.

The project organisation structure is presented in the organigram below.



The Project Board (also called Project Steering Committee) is responsible for making by consensus, management decisions when guidance is required by the Project Manager, including recommendations for UNDP/Implementing Partner approval of project plans and revisions, and addressing any project level grievances. In order to ensure UNDP's ultimate accountability, Project Board decisions should be made in accordance with standards that shall ensure management for development results, best value money, fairness, integrity, transparency and effective international competition. In case a consensus cannot be reached within the Board, final decision shall rest with the UNDP Programme Manager.

Specific responsibilities of the Project Board include:

- Provide overall guidance and direction to the project, ensuring it remains within any specified constraints;
- Address project issues as raised by the project manager;
- Provide guidance on new project risks, and agree on possible countermeasures and management actions to address specific risks;
- Agree on project manager's tolerances as required;
- Review the project progress, and provide direction and recommendations to ensure that the agreed deliverables are produced satisfactorily according to plans;
- Appraise the annual project implementation report, including the quality assessment rating report; make recommendations for the workplan;
- Provide ad hoc direction and advice for exceptional situations when the project manager's tolerances are exceeded; and
- Assess and decide to proceed on project changes through appropriate revisions.

The composition of the Project Board must include the following roles:

Executive: The Executive is an individual who represents ownership of the project who will chair the Project Board. This role can be held by a representative from the Government Cooperating Agency or UNDP. The Executive is:

The Executive is ultimately responsible for the project, supported by the Senior Beneficiary and Senior Supplier. The Executive's role is to ensure that the project is focused throughout its life cycle on achieving its objectives and delivering outputs that will contribute to higher level outcomes. The executive has to ensure that the project gives value for money, ensuring cost-conscious approach to the project, balancing the demands of beneficiary and supplier.

Specific Responsibilities: (as part of the above responsibilities for the Project Board)

- Ensure that there is a coherent project organisation structure and logical set of plans;
- Set tolerances in the AWP and other plans as required for the Project Manager;
- Monitor and control the progress of the project at a strategic level;
- Ensure that risks are being tracked and mitigated as effectively as possible;
- Brief relevant stakeholders about project progress;
- Organise and chair Project Board meetings.

Senior Supplier: The Senior Supplier is an individual or group representing the interests of the parties concerned which provide funding and/or technical expertise to the project (designing, developing, facilitating, procuring, implementing). The Senior Supplier's primary function within the Board is to provide guidance regarding the technical feasibility of the project. The Senior Supplier role must have the authority to commit or acquire supplier resources required. If necessary, more than one person may be required for this role. Typically, the implementing partner, UNDP and/or donor(s) would be represented under this role. The Senior Supplier is:

Specific Responsibilities (as part of the above responsibilities for the Project Board)

- Make sure that progress towards the outputs remains consistent from the supplier perspective;
- Promote and maintain focus on the expected project output(s) from the point of view of supplier management;

- Ensure that the supplier resources required for the project are made available;
- Contribute supplier opinions on Project Board decisions on whether to implement recommendations on proposed changes;
- Arbitrate on, and ensure resolution of, any supplier priority or resource conflicts.

Senior Beneficiary: The Senior Beneficiary is an individual or group of individuals representing the interests of those who will ultimately benefit from the project. The Senior Beneficiary's primary function within the Board is to ensure the realization of project results from the perspective of project beneficiaries. The Senior Beneficiary role is held by a representative of the government or civil society. The Senior Beneficiary is:

The Senior Beneficiary is responsible for validating the needs and for monitoring that the solution will meet those needs within the constraints of the project. The Senior Beneficiary role monitors progress against targets and quality criteria. This role may require more than one person to cover all the beneficiary interests. For the sake of effectiveness, the role should not be split between too many people.

Specific Responsibilities (as part of the above responsibilities for the Project Board)

- Prioritize and contribute beneficiaries' opinions on Project Board decisions on whether to implement recommendations on proposed changes;
- Specification of the Beneficiary's needs is accurate, complete and unambiguous;
- Implementation of activities at all stages is monitored to ensure that they will meet the beneficiary's needs and are progressing towards that target;
- Impact of potential changes is evaluated from the beneficiary point of view;
- Risks to the beneficiaries are frequently monitored.

The Project Manager has the authority to run the project on a day-to-day basis on behalf of the Project Board within the constraints laid down by the Board. The Project Manager is responsible for day-to-day management and decision-making for the project. The Project Manager's prime responsibility is to ensure that the project produces the results specified in the project document, to the required standard of quality and within the specified constraints of time and cost.

The Implementing Partner appoints the Project Manager, who should be different from the Implementing Partner's representative in the Project Board.

Specific responsibilities include:

- Provide direction and guidance to project team(s)/ responsible party (ies);
- Liaise with the Project Board to assure the overall direction and integrity of the project;
- Identify and obtain any support and advice required for the management, planning and control of the project;
- Responsible for project administration;
- Plan the activities of the project and monitor progress against the project results framework and the approved annual workplan;
- Mobilize personnel, goods and services, training and micro-capital grants to initiative activities, including drafting terms of reference and work specifications, and overseeing all contractors' work;
- Monitor events as determined in the project monitoring schedule plan/timetable, and update the plan as required;
- Manage requests for the provision of financial resources by UNDP, through advance of funds, direct payments or reimbursement using the fund authorization and certificate of expenditures;
- Monitor financial resources and accounting to ensure the accuracy and reliability of financial reports;
- Be responsible for preparing and submitting financial reports to UNDP on a quarterly basis;

- Manage and monitor the project risks initially identified and submit new risks to the project board for consideration and decision on possible actions if required; update the status of these risks by maintaining the project risks log;
- Capture lessons learned during project implementation;
- Prepare the annual workplan for the following year; and update the Atlas Project Management module if external access is made available.
- Prepare the GEF PIR and submit the final report to the Project Board;
- Based on the GEF PIR and the Project Board review, prepare the AWP for the following year.
- Ensure the mid-term review process is undertaken as per the UNDP guidance, and submit the final MTR report to the Project Board.
- Identify follow-on actions and submit them for consideration to the Project Board;
- Ensure the terminal evaluation process is undertaken as per the UNDP guidance, and submit the final TE report to the Project Board;

UNDP provides a three – tier supervision, oversight and quality assurance role – funded by the GEF agency fee – involving UNDP staff in Country Offices and at regional and headquarters levels. Project Assurance must be totally independent of the Project Management function. The quality assurance role supports the Project Board and Project Management Unit by carrying out objective and independent project oversight and monitoring functions. This role ensures appropriate project management milestones are managed and completed. The Project Board cannot delegate any of its quality assurance responsibilities to the Project Manager. This project oversight and quality assurance role is covered by the GEF Agency.

The Project unit will be based at the UNDP Programme Office (Tajikistan). Implementation of project activities will be fully supported by the Energy & Environment Programme Officer and the Head of UNDP Energy and Environment Programme, as well as other programme staff. The Project Manager will ensure synergy with all ongoing relevant projects within the Programme for more effective impact.

Coordination

The project will build on the UNDP-led GEF-funded “*Technology Transfer and Market Development for Small Hydropower*” project (completed in 2017), which facilitated technology transfer and local capacity development for domestic manufacturing, construction and maintenance of small hydro power plants. As a result of the project, two local manufacturers will be able to provide turnkey SHP solutions and ensure required operational and maintenance services. Both companies expressed interest in piloting RESCO-based implementation of small-hydro power projects.

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)?*

The Project will generate important development benefits stemming from improved access to energy services by rural populations of Tajikistan, in particular in remote Pamir mountains, which are currently suffering from unreliable energy supply or do not have any access to centralized energy supply. In total over 17,000 people, including 11,000 women, will directly benefit from the Project’s support.

In addition, the Project will contribute to SDGs 1, 7, 8, 9, 13 (see Figure 3 in the UNDP Project Document) and deliver a number of socio-economic and environmental benefits, as follows:

- Improve the security of energy supply in the country, in particular to its most vulnerable rural residents, by reducing dependency on the unreliable predominantly hydro-power based central grid, which is further at risk due to seasonal variations as well as climate change.

- Serve as a leading example of energy sustainability using green energy in the region. Central Asia is still mostly reliant on fossil fuels. Energy generation using fossil fuels is perceived as being cheapest, as external costs and risks are rarely internalized in the overall cost of energy. Initiating a project in green energy development provides an example for the region on best practices and puts Tajikistan, traditionally viewed as a ‘poor neighbor’, at the forefront of sustainable energy development.
- Support the development of new skills related to green energy. Provision of new products and services in Tajikistan will require capacity building activities to ensure a viable level of local support to EE and RE projects as well as to ensure the sustainability of the market after project end.
- Create new jobs. Implementation of the Project requires development of the whole value chain, from supply through to planning and implementation to demand. People with specific competences, either existing or acquired through training and education, are critical to success of the Project. As the market starts growing, new human resources will be needed by market players.
- Create a positive socio-economic momentum. All of the above will transform the energy industry of Tajikistan from a centralized, historically unattractive utility market to a dynamic, multi-stakeholder environment specifically designed to attract SMEs, and create an environment for development and implementation of new green energy goods and services.

Achievement of tangible socio-economic and local environmental benefits, as detailed above, will help raise awareness and create political buy-in for green energy among public authorities beyond the environmental sector (i.e. energy, financial, economic and social agencies). Without their pro-active involvement and commitments, implementation of required policy changes in support of global climate change mitigation efforts will not be possible.

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.*

Component 4 will support knowledge generation and sharing project-related best practices and lessons learned, with all Components of the Project anticipated to contribute knowledge products as specified in the table below. These items will inform a knowledge platform for the Project and will be used to build the capacity of relevant stakeholders. Each knowledge product will be tailored to its target audience and appropriate communication channels will be identified. Further, results from the Project will be disseminated within and beyond the Project’s intervention zone through existing information sharing networks and forums. The Project will identify and participate in, as relevant and appropriate, scientific, policy-based and/or other networks, which may benefit from the Project’s lessons learned. The Project will identify, analyze and share lessons learned that might be beneficial in the design and implementation of similar future projects. Finally, there will be a two-way flow of information between this Project and other projects of a similar focus.

Component	Knowledge Product	Activity
Component 1	Policy and regulatory gap analysis for GE SMEs	Activity 1.1.1
	Package of fiscal, custom and other incentives related to production and import of GE technologies and related training materials	Activity 1.2.1
	Review of international performance standards for solar PV and SWH technologies	Activity 1.3.1
	Measurement & verification tool for compliance check with performance standards	Activity 1.3.4
Component 2	Comprehensive market assessment for GE project demand	Activity 2.1.1
	Training package for MFIs	Activity 2.2.2
	Monitoring tools for tracking performance of green loans	Activity 2.2.3
Component 3	RESCO model design, training and educational materials	Activity 3.1.1
	Awareness and outreach materials	Activity 3.3.2
Component 4	Project lessons learned report	Activity 4.3.2

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.:*

Tajikistan's 3rd National Communication (3rd NC)¹⁰ to the UNFCCC emphasizes the importance of renewable energy (small hydro and solar) development, specifically in remote rural communities, as the priority mitigation, climate change adaptation and poverty alleviation measure for the country. In particular, the 3rd NC clearly acknowledges the problem related to the energy deficit in rural areas and limited electricity supply in rural areas (2 to 8 hours per day) among the key development challenges faced by the country. It further states that since the majority of Tajikistan's population lives in rural areas, the key source of CO₂ emissions is 'energy activities' in housing and communal areas. According to the 3rd NC, "the contribution of these activities to CO₂ emissions has increased from 40% in 1990 to 70% after 2000" and therefore should be the focus of the national mitigation and poverty reduction strategies. In this regard, the 3rd NC identifies the development of community-level renewable energy systems (RES) among national mitigation and adaptation priorities and specifies that international support is needed by Tajikistan to assist with "dissemination of best practices at the local level to support and promote state measures on RES".

According to the Intended Nationally Determined Contribution (INDC)¹¹, Tajikistan declared a flexible target for GHG emissions to not exceed 80 to 90 percent of the 1990 level by 2030. The INDC also notes the potential to achieve further reduction in GHG emissions and remain at 65 to 75 percent of the 1990 level by 2030, provided additional external resources are mobilized and scientific and technical assistance are provided to aid the Government in the implementation of its strategic priorities for energy sector development.

C. DESCRIBE THE BUDGETED M & E PLAN

Project-level monitoring and evaluation will be undertaken in compliance with UNDP requirements as outlined in the [UNDP POPP](#) and [UNDP Evaluation Policy](#). While these UNDP requirements are not outlined in this document, the UNDP Country Office will work with the relevant project stakeholders to ensure that UNDP M&E requirements are met in a timely fashion and to high quality standards. Additional mandatory GEF-specific M&E requirements (as outlined below) will be undertaken in accordance with the [GEF M&E Policy](#) and other relevant GEF policies.

In addition to these mandatory UNDP and GEF M&E requirements, other M&E activities deemed necessary to support project-level adaptive management will be agreed during the Project Inception Workshop and will be detailed in the Inception Report. This will include the exact role of project target groups and other stakeholders in project M&E activities including the GEF Operational Focal Point and national/regional institutes assigned to undertake project monitoring. The GEF Operational Focal Point will strive to ensure consistency in the approach taken to the GEF-specific M&E requirements (notably the GEF CCM Tracking Tool) across all GEF-financed projects in the country. This could be achieved for example by using one national institute to complete the GEF Tracking Tools for all GEF-financed projects in the country, including projects supported by other GEF Agencies.

M&E Oversight and monitoring responsibilities

Project Manager: The Project Manager is responsible for day-to-day project management and regular monitoring of project results and risks, including social and environmental risks. The Project Manager will ensure that all project staff maintain a high level of transparency, responsibility and accountability in M&E and reporting of project results. The Project Manager will inform the Project Board, the UNDP Country Office and the UNDP-GEF RTA of any delays or difficulties as they arise during implementation so that appropriate support and corrective measures can be adopted.

¹⁰ http://unfccc.int/resource/docs/natc/tjknc3_eng.pdf

¹¹ As of January 2017, Tajikistan has not submitted its NDC (New Climate Action Plan), only the INDC (Intended Nationally Determined Contribution). <http://www4.unfccc.int/submissions/indc/Submission%20Pages/submissions.aspx>

The Project Manager will develop annual work plans based on the multi-year work plan, including annual output targets to support the efficient implementation of the project. The Project Manager will ensure that the standard UNDP and GEF M&E requirements are fulfilled to the highest quality. This includes, but is not limited to, ensuring the results framework indicators are monitored annually in time for evidence-based reporting in the GEF PIR, and that the monitoring of risks and the various plans/strategies developed to support project implementation (e.g. gender strategy, KM strategy etc.) occur on a regular basis.

Project Board: The Project Board will take corrective action as needed to ensure the project achieves the desired results. The Project Board will hold project reviews to assess the performance of the project and appraise the Annual Work Plan for the following year. In the project's final year, the Project Board will hold an end-of-project review to capture lessons learned and discuss opportunities for scaling up and to highlight project results and lessons learned with relevant audiences. This final review meeting will also discuss the findings outlined in the project terminal evaluation report and the management response.

UNDP Country Office: The UNDP Country Office will support the Project Manager as needed, including through annual supervision missions. The annual supervision missions will take place according to the schedule outlined in the annual work plan. Supervision mission reports will be circulated to the project team and Project Board within one month of the mission. The UNDP Country Office will initiate and organize key GEF M&E activities including the annual GEF PIR, the independent mid-term review and the independent terminal evaluation. The UNDP Country Office will also ensure that the standard UNDP and GEF M&E requirements are fulfilled to the highest quality.

UNDP Country Office is responsible for complying with all UNDP project-level M&E requirements as outlined in the UNDP POPP. This includes ensuring the UNDP Quality Assurance Assessment during implementation is undertaken annually; that annual targets at the output level are developed, and monitored and reported using UNDP corporate systems; the regular updating of the ATLAS risk log; and, the updating of the UNDP gender marker on an annual basis based on gender mainstreaming progress reported in the GEF PIR and the UNDP ROAR. Any quality concerns flagged during these M&E activities (e.g. annual GEF PIR quality assessment ratings) must be addressed by the UNDP Country Office and the Project Manager. The UNDP Country Office will retain all M&E records for this project for up to seven years after project financial closure in order to support ex-post evaluations undertaken by the UNDP Independent Evaluation Office (IEO) and/or the GEF Independent Evaluation Office (IEO).

UNDP-GEF Unit: Additional M&E and implementation quality assurance and troubleshooting support will be provided by the UNDP-GEF Regional Technical Advisor and the UNDP-GEF Directorate as needed.

Audit: The project will be audited according to UNDP Financial Regulations and Rules and applicable audit policies.¹²

Additional GEF monitoring and reporting requirements

Inception Workshop and Report: A project inception workshop will be held within two months after the UNDP Project Document has been signed by all relevant parties to, amongst others:

- a) Re-orient project stakeholders to the project strategy and discuss any changes in the overall context that influence project implementation including the formulation of detail criteria for selection of municipalities and participation in the final decision on their selection
- b) Discuss the roles and responsibilities of the project team, including reporting and communication lines and conflict resolution mechanisms;
- c) Review the results framework and finalize the indicators, means of verification and monitoring plan;
- d) Discuss reporting, monitoring and evaluation roles and responsibilities and finalize the M&E budget; identify national/regional institutes to be involved in project-level M&E; discuss the role of the GEF OFP in M&E;

¹² See guidance here: <https://info.undp.org/global/popp/frm/pages/financial-management-and-execution-modalities.aspx>

- e) Update and review responsibilities for monitoring the various project plans and strategies, including the risk log; Environmental and Social Management Plan and other safeguard requirements (for moderate and high risk projects only); the gender strategy; the knowledge management strategy, and other relevant strategies;
- f) Review financial reporting procedures and mandatory requirements, and agree on the arrangements for the annual audit; and
- g) Plan and schedule Project Board meetings and finalize the first year annual work plan.

The Project Manager will prepare the inception report no later than one month after the inception workshop. The inception report will be cleared by the UNDP Country Office and the UNDP-GEF Regional Technical Adviser, and will be approved by the Project Board.

GEF Project Implementation Report (PIR): The Project Manager, the UNDP Country Office, and the UNDP-GEF Regional Technical Advisor will provide objective input to the annual GEF PIR covering the reporting period July (previous year) to June (current year) for each year of project implementation. The Project Manager will ensure that the indicators included in the project results framework are monitored annually in advance of the PIR submission deadline so that progress can be reported in the PIR. Any environmental and social risks and related management plans will be monitored regularly, and progress will be reported in the PIR.

The PIR submitted to the GEF will be shared with the Project Board. The UNDP Country Office will coordinate the input of the GEF Operational Focal Point and other stakeholders to the PIR as appropriate. The quality rating of the previous year's PIR will be used to inform the preparation of the subsequent PIR.

Lessons learned and knowledge generation: Results from the project will be disseminated within and beyond the project intervention area through existing information sharing networks and forums. The project will identify and participate, as relevant and appropriate, in scientific, policy-based and/or any other networks, which may be of benefit to the project. The project will identify, analyse and share lessons learned that might be beneficial to the design and implementation of similar projects and disseminate these lessons widely. There will be continuous information exchange between this project and other projects of similar focus in the same country, region and globally.

GEF Focal Area Tracking Tools: The following GEF Tracking Tool will be used to monitor global environmental benefit results: Climate Change Mitigation.

The baseline/CEO Endorsement GEF Focal Area Tracking Tool will be updated by the Project Manager/Team and shared with the mid-term review consultants and terminal evaluation consultants (not the evaluation consultants hired to undertake the MTR or the TE) before the required review/evaluation missions take place. The updated GEF Tracking Tool will be submitted to the GEF along with the completed Mid-term Review report and Terminal Evaluation report.

Independent Mid-term Review (MTR): An independent MTR process will begin after the second PIR has been submitted to the GEF, and the MTR report will be submitted to the GEF in the same year as the 3rd PIR. The MTR findings and responses outlined in the management response will be incorporated as recommendations for enhanced implementation during the final half of the project's duration. The terms of reference, the review process and the MTR report will follow the standard templates and guidance prepared by the UNDP IEO for GEF-financed projects available on the [UNDP Evaluation Resource Center \(ERC\)](#). As noted in this guidance, the evaluation will be 'independent, impartial and rigorous'. The consultants that will be hired to undertake the assignment will be independent from organizations that were involved in designing, executing or advising on the project to be evaluated. The GEF Operational Focal Point and other stakeholders will be involved and consulted during the terminal evaluation process.

Additional quality assurance support is available from the UNDP-GEF Directorate. The final MTR report will be available in English and will be cleared by the UNDP Country Office and the UNDP-GEF Regional Technical Adviser, and approved by the Project Board.

Terminal Evaluation (TE): An independent TE will take place upon completion of all major project outputs and activities. The terminal evaluation process will begin three months before operational closure of the project allowing the evaluation mission to proceed while the project team is still in place, yet ensuring the project is close enough to completion for the evaluation team to reach conclusions on key aspects such as project sustainability. The Project Manager will remain on contract until the TE report and management response have been finalized. The terms of reference, the evaluation process and the final TE report will follow the standard templates and guidance prepared by the UNDP IEO for GEF-financed projects available on the UNDP Evaluation Resource Center. As noted in this guidance, the evaluation will be ‘independent, impartial and rigorous’. The consultants that will be hired to undertake the assignment will be independent from organizations that were involved in designing, executing or advising on the project to be evaluated. The GEF Operational Focal Point and other stakeholders will be involved and consulted during the terminal evaluation process. Additional quality assurance support is available from the UNDP-GEF Directorate. The final TE report will be cleared by the UNDP Country Office and the UNDP-GEF Regional Technical Adviser, and will be approved by the Project Board. The TE report will be publically available in English on the UNDP ERC.

The UNDP Country Office will include the planned project terminal evaluation in the UNDP Country Office evaluation plan, and will upload the final terminal evaluation report in English and the corresponding management response to the UNDP Evaluation Resource Centre (ERC). Once uploaded to the ERC, the UNDP IEO will undertake a quality assessment and validate the findings and ratings in the TE report, and rate the quality of the TE report. The UNDP IEO assessment report will be sent to the GEF IEO along with the project terminal evaluation report.

Final Report: The project’s terminal PIR along with the TE report and corresponding management response will serve as the final project report package. The final project report package shall be discussed with the Project Board during an end-of-project review meeting to discuss lesson learned and opportunities for scaling up.

Mandatory GEF M&E Requirements and M&E Budget

GEF M&E requirements	Primary responsibility	Indicative costs to be charged to the Project Budget ¹³ (US\$)		Time frame
		GEF grant	Co-financing	
Inception Workshop	UNDP Country Office	5,000	5,000	Within two months of project document signature
Inception Report	Project Manager and Chief Technical Advisor	5,000	None	Within two weeks of inception workshop
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: 8,000 Total: 40,000	Per year: 4,500 Total: 22,500	Annually
GEF Project Implementation Report (PIR)	Project Manager and UNDP Country Office and UNDP-GEF team	None	None	Annually
Supervision missions	UNDP Country Office	None ¹⁴	None	Annually
Oversight missions	UNDP-GEF team	None	None	Troubleshooting as needed
Knowledge management as outlined in Outcome 4	Project Manager	25,000 (1% of GEF grant)	25,000	On-going

¹³ Excluding project team staff time and UNDP staff time and travel expenses.

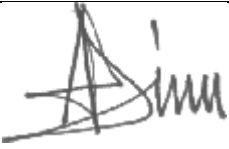
¹⁴ The costs of UNDP Country Office and UNDP-GEF’s participation and time are charged to the GEF Agency Fee.

GEF M&E requirements	Primary responsibility	Indicative costs to be charged to the Project Budget ¹³ (US\$)		Time frame
		GEF grant	Co-financing	
GEF Secretariat learning missions/site visits	Project Manager and UNDP-GEF team	None	None	To be determined.
Mid-term GEF Tracking	Project Manager	5,000	None	Before mid-term review mission takes place
Independent Mid-term Review (MTR)	UNDP Country Office and Project team and UNDP-GEF team	20,000	5,000	Between 2 nd and 3 rd PIR.
Annual audit costs	UNDP Country Office and Project team	38,038	Per year: 5,000 Total: 25,000	Annually
Final GEF Tracking Tool	Project Manager	5,000	None	Before terminal evaluation mission takes place
Independent Terminal Evaluation (TE) included in UNDP evaluation plan	UNDP Country Office and Project team and UNDP-GEF team	30,000	None	At least three months before operational closure
Translation of MTR and TE reports into English	UNDP Country Office	5,000	500	As required. GEF will only accept reports in English.
TOTAL indicative COST Excluding project team staff time, and UNDP staff and travel expenses		178,038	83,000	

PART III: CERTIFICATION BY GEF PARTNER AGENCY(IES)

A. GEF Agency(ies) certification

This request has been prepared in accordance with GEF policies¹⁵ and procedures and meets the GEF criteria for CEO endorsement under GEF-6.

Agency Coordinator, Agency Name	Signature	Date (MM/dd/yyyy)	Project Contact Person	Telephone	Email Address
Adriana Dinu, Executive Coordinator, GEF UNDP		01/10/2018	Marcel Alers PTA, EITT	1-212-906- 6199	Marcel.alers@undp.org

¹⁵ GEF policies encompass all managed trust funds, namely: GEFTF, LDCF, SCCF and CBIT

ANNEX A: PROJECT RESULTS FRAMEWORK

This project will contribute to the following Sustainable Development Goal (s): <ul style="list-style-type: none"> • SDG1 (No Poverty) • SDG7 (Affordable and Clean Energy) • SDG8 (Decent Work and Economic Growth) • SDG9 (Industry, Innovation and Infrastructure) • SDG13 (Climate Action). 					
This project will contribute to the following country outcome included in the UNDAF/Country Programme Document: UNDAF/CPD Outcome: People in Tajikistan are more resilient to natural and manmade disasters and benefit from improved policy and operational frameworks for environmental protection and sustainable management of natural resources. UNDAF/CPD Outcome Indicator: Number of new green jobs created, environmentally sustainable livelihoods promoted through management of natural resources, ecosystems services, chemicals and waste, disaggregated by sex.					
This project will be linked to the following output of the UNDP Strategic Plan: Output 1.5: Inclusive and sustainable solutions adopted to achieve increased energy efficiency and universal modern energy access (especially off-grid sources of renewable energy)					
	Objective and Outcome Indicators	Baseline	Mid-term Target	End of Project Target	Assumptions ¹⁶
Project Objective: Identify, support and promote scalable, private sector-led business models for provision of affordable and sustainable energy products and services for Tajikistan's rural population	[GEF CCM Tracking Tool Indicator]: Volume of investment mobilized and leveraged for low GHG emission development s (mln US\$) [Indicator UNDP SP 2018-2021, Output 2.5.1]: Amount of resources brokered for investment in renewable energy and zero-carbon development	n/a	10 mln US\$	30 mln US\$	Significant unmet demand for energy among rural population persist
	Extent of change in modern energy coverage by users	No change	4,000 new users of RE products/services	Over 17,000 new users of RE products/services	Willingness and ability to pay for, at least, basic energy service provision remains at baseline level
	tCO _{2eq} , direct emissions reductions (which are attributable to the project-facilitated investments made during the project's supervised implementation period, totaled over the respective lifetime of the investments)	n/a	15,000	53,000	Estimation over RE investment lifetime Co-financing realized
	Increase in installed RE capacity per technology (MW for electricity and m ² for SWH)	n/a	-	0.35 MW solar PV 0.40 MW small hydro 5,000 m ² SWH	Co-financing realized
	Lifetime RE production per technology (MWh)	n/a	-	15,330 MWh solar PV 43,800 MWh small hydro	Co-financing realized

¹⁶ Risks are outlined in the Feasibility section of this project document.

	Indicators	Baseline	Mid-term Target	End of Project Target	Assumptions
Component/Outcome 1 Enabling policy and regulatory framework and capacity development for green energy SMEs	Status of by-laws enabling implementation of the Energy Efficiency Law	None existing	Draft sent to decision-makers	Final version adopted	Commitment of the Government to pursue proposed regulatory changes
	Number of officials trained (including number of women)	0	20 (5)	50 (15)	Staff turn-over in the Government is insignificant and trained people remain in their functions
	Additional decentralized RE-based capacity enabled by the designed financial incentives scheme, MW	None existing	0,35 MW	2 MW	Commitment of the Government to establish dedicated financial incentive scheme
	Status of system of compliance checks and enforcement of performance standard for selected EE/RE products	None existing	Draft developed and sent to decision-makers	Final version approved by decision-makers	At least basic capacities exist to enforce performance standards Commitment of relevant enforcement agencies to implement standards
Component/ Outcome 2 Access to finance for green energy SMEs and/or energy service users	Number and volume (US\$) of green loans approved for SWH and other targeted EE/RE products (including those for women-led SMEs)	0	500 loans / US\$ 650,000 (at least 25 loans to women-led SMEs)	2,000 loans/ US\$ 2,600,000 (at least 100 loans to women-led SMEs)	Willingness and ability to pay for, at least, basic energy service provision remains at baseline level
	Number of beneficiaries using RE (including number of women)	0	4,000 (2,500)	16,000 (10,000)	MFIs are interested and capable of introducing green loans
Component/ Outcome 3 Business models for green energy SME	Installed new RE-power generation capacity based on RESCO model, MW	0	0.35 MW	0.75 MW	Commitment of Pamir Energy to co-finance and replicate the project
	Number of SWH systems facilitated by the project (in tourism facilities)	0	20	100	Tourism industry stakeholders and GE suppliers are interested in collaboration
	Number of people with improved access to energy (including percentage of women)	0	4,000 (60% women)	17,867 (60% women)	Co-financing realized
	Number of people accessed by marketing and awareness raising campaign (including percentage of women)	N/a	1,000,000 (60% women)	3,000,000 (60% women)	Partners (NGOs and Inform-centers) remain committed to support PR and awareness raising campaign
Component/ Outcome 4 Knowledge Management and M&E	Number of organizations receiving results of project, including GHG emissions and socio-economic benefits (targeted number to be established during project inception)	None	None	100% of identified participating stakeholder organizations	Responsibility for data collection are clearly assigned and responsible entities have adequate capacities and access to data Required data are available and/or can be collected with reasonable amount of effort

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

Comments (by Party)	Location	Response and Action
GEF Sec		
Recommendation: At the CEO ER stage, please budget M&E.	CEO Endorsement Request, section "C. Describe the budgeted M&E plan" and UNDP Project Document Section VI	Detailed and budgeted M&E plan has been developed.
STAP		
<p>1. The project revolves around manufacturers of solar thermal systems and energy efficient stoves. It supports close involvement by women and financing. Distributed renewable electricity is another component to partly overcome the generation capacity deficit in meeting growing demand.</p> <p>The government is supporting a new 150 MW coal-fired power plant goes against the need to move away from fossil fuel combustion, but gaining the balance between sustainable development, energy access, energy security and reducing greenhouse gas emissions is a challenge. That is why the uptake of more low-carbon technologies as in this project proposal should be encouraged.</p> <p>However, it should be noted that building new coal-fired power plants goes against the target quoted in the INDC</p> <p>http://www4.unfccc.int/submissions/INDC/Published%20Documents/Tajikistan/1/INDC-TJK%20final%20ENG.pdf</p>		Noted.
<p>2. The support for SMEs working in with manufacturing and installing and maintaining low-carbon technologies is warranted providing finance helps to reduce the risks for these businesses. The other risks listed would be partly overcome through this project. The use of GEF funding to offer financial incentives to RESCO clients for small hydro and solar PV makes sense.</p>	UNDP ProDoc, Component 2	<p>Component 2 of the project will support end-users/RESCO clients to make purchase of green energy products more affordable by implementing green loan products.</p> <p>As far as direct financial incentives for RESCO clients, the Government did not support such an approach since residential tariffs are already regulated and set at the level to make energy supply affordable to consumers. RESCOs will not be able to set-up tariffs higher than those established on the market. Therefore, the project proposed provision of targeted incentives to RESCOs to make their investment viable.</p>
<p>3. It is not clear where the figure of 300g CO₂/kWh came from if based on UNDP field surveys but this is too low for small diesel generation. It is more likely to be threefold that the average (http://www.world-nuclear.org/uploadedFiles/org/WNA/Publications/Working_Group_Reports/comparison_of_lifecycle.pdf). See also the UNFCCC "Tool to calculate baseline, project and/or leakage emissions from electricity consumption" CDM Executive Board document that</p>	Section V of the UNDP Project Document	Analysis of the baseline situation in the off-grid communities at the PPG stage revealed use of diesel-based generation for estimating baseline GHG emissions is not a viable approach: despite availability of gensets, its use is very limited to due to high costs of fuel. Instead, off-grid communities are predominantly relying on local biomass supply, which is the primary cause of deforestation in Tajikistan in particular in Pamir.

Comments (by Party)	Location	Response and Action
<p>report 1300g CO₂/kWh from small-scale diesel generation plants: http://cdm.unfccc.int/methodologies/PAMethodologies/tools/am-tool-05-v1.pdf/history_view Also where the 130 g CO₂-eq /l/day for solar water heating came from is unclear since the GEF Lebanon project is not referenced. These values need to be confirmed and mitigation potentials recalculated at the CEO endorsement stage.</p>		<p>Consequently, to estimate baseline GHG emissions assumptions and default factors were used based on Zandler et al. 2016. Scenarios of Solar Energy Use on the “Roof of the World”: Potentials and Environmental Benefits. Mountain Research and Development, 36(3):256-266 (Available at http://www.bioone.org/doi/pdf/10.1659/MRD-JOURNAL-D-15-00077.1). This study, undertaken in the Pamir mountains of Tajikistan, provides detailed location-specific estimation of GHG emission reduction potential of solar PV-based rural electrification projects.</p>
<p>4. Why the community of Pamiri Tajiks has been selected is not justified. Could there not be more than one community with differing solar radiation levels and hydro reliability? Is the hydro source reliable all year round? What is the annual solar radiation level in this region and was that figure used for calculating the potentials? Selection criteria should be elaborated during project preparation.</p>	Section A.3	<p>The choice of Pamiri Tajiks has been made based on a number of considerations. First, it is the region with highest number of off-grid communities where provision of centralized (through grid expansion) energy services is not viable. Second, the Government of Tajikistan specifically requested UNDP to consider and prioritize interests of Pamiri Tajik, as the minority population group, in this proposal. Third, Pamir Energy LLC is the only existing private IPP with sufficient managerial and financial capacity to implement and carry on such complex investment. Detailed solar radiation assessment and model is presented by Zandler and is available at http://www.bioone.org/doi/pdf/10.1659/MRD-JOURNAL-D-15-00077.1</p> <p>In the course of the Project other locations will be identified. Key selection criteria are the lack of access to central grid and non-feasibility of central grid expansion to the site.</p> <p>Also, it is worth noting that Component 2 and Component 3 (Output 3.2) will target all territories of Tajikistan and therefore other rural communities (beyond Tajik Pamiri) will benefit.</p>
Germany		
<p>Germany approves this PIF in the work program but asks that the following comments are taken into account:</p> <p>Germany very much welcomes the proposal which addresses the almost unused potential of renewable energy in general and of small hydropower plants in particular in Tajikistan. Rooted in baseline scenarios and a risk assessment, the proposal delivers a compact overview of measures and envisaged targets. Cooperation partners and existing initiatives are clearly referenced as well. The proposal also ensures a gender-sensitive approach which is welcomed.</p> <p>Suggestions for improvements to be made during the drafting of the final project proposal:</p> <ul style="list-style-type: none"> • The proposal would benefit from being embedded more clearly into the overall strategy of the country to 	<p>The suggestions for improvement have been addressed in the following sections of the UNDP Project Document:</p> <ul style="list-style-type: none"> - alignment and embedding with national strategy: description of Component 1 - market transformation: §24, 43, 58 	<p>Tajikistan doesn't have a stand-alone Renewable Energy Strategy, but does have Renewable Energy and Energy Efficiency Laws. Component 1 of the project will directly respond to the need to promote implementation of those laws thus</p>

Comments (by Party)	Location	Response and Action
<p>deliver renewable energy. Could the project deliver market transformation on bigger scale as well? This would raise the ambition of the project and might upscale possibilities.</p> <ul style="list-style-type: none"> • Clearer indicators of success, for instance, in raising public awareness could be added. Further, linkages between the three components could be pointed out in more detail to present a more complete and comprehensive picture of the envisaged project. 	<ul style="list-style-type: none"> - indicators of success: Logical framework - linkages between component: Theory of change, Figure 3. 	<p>embedding the project firmly in the national policy framework for RE.</p> <p>The Project's potential to deliver market transformation at scale is elaborated in paragraph 43 (of the UNDP Project Document)</p> <p>Indicator in awareness raising has been included in the Project Results Framework (Component 3).</p> <p>Linkages between the three indicators are illustrated in the Theory of Change summarized in the UNDP Project Document, Figure 3.</p>

ANNEX C: STATUS OF IMPLEMENTATION OF PROJECT PREPARATION ACTIVITIES AND THE USE OF FUNDS¹⁷

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

PPG Grant Approved at PIF: US\$70,000			
<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>
Component A: Technical Review	35,000.00	28,753.00	9,000.00
Component B: Institutional arrangements, monitoring and evaluation	6,500.00	6,520.00	0.00
Component C: Financial planning and co-financing investments	15,600.00	13,500.00	0.00
Component D: Validation workshop	12,900.00	12,227.00	0.00
Total	70,000.00	61,000.00	9,000.00

¹⁷ 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.

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

N/a