REQUEST FOR CEO ENDORSEMENT[1]

PROJECT TYPE: Full-sized Project
TYPE OF TRUST FUND:GEF Trust Fund

PART I: PROJECT INFORMATION

Project Title: Small Decentralized Renewable Energy Power Generation			
Country(ies):	Lebanon	GEF Project ID:[2]	4749
GEF Agency(ies):	UNDP (select) (select)	GEF Agency Project ID:	4695
Other Executing Partner(s):	Ministry of Energy and Water	Submission Date:	2013-07-02
GEF Focal Area (s):	Climate Change	Project Duration(Months)	48
Name of Parent Program (if applicable): For SFM/REDD+ ☐		Agency Fee ($):	145,000

A. FOCAL AREA STRATEGY FRAMEWORK[3]

Focal Area Objectives	Expected FA Outcomes	Expected FA Outputs	Trust Fund	Grant Amount ($)	Cofinancing ($)
CCM-3 (select)	Favorable policy and regulatory environment created for renewable energy investments	Renewable energy policy and regulation in place	GEF TF	214,000	1,180,000
CCM-3 (select)	Investment in renewable energy technologies increased	Renewable energy capacity installed	GEF TF	1,163,500	9,736,000
(select) (select)			(select)		
(select) (select)			(select)		
(select) (select)			(select)		
(select) (select)			(select)		
(select) (select)			(select)		
(select) (select)			(select)		
(select) (select)			(select)		
(select) (select)			(select)		
(select) (select)	Others		(select)		
		Subtotal		1,377,500	10,916,000
		Project management cost[4]	GEF TF	72,500	700000
		Total project costs		1,450,000	11,616,000

B. PROJECT FRAMEWORK

Project Objective: Reducing greenhouse gas emissions by the removal of barriers to widespread application of decentralized renewable energy based power generation.

Project Component	Grant Type	Expected Outcomes	Expected Outputs	Trust Fund	Grant Amount ($)	Confirmed Cofinancing ($)
Financing for decentralised RE	Inv	Investments in decentralized	1.1 Approved and operational financing	GEF TF	900,000	8,825,000

[1] It is important to consult the GEF Preparation Guidelines when completing this template
[2] Project ID number will be assigned by GEFSEC.
[3] Refer to the Focal Area/LDCF/SCCF Results Framework when filling up the table in item A.
[4] GEF will finance management cost that is solely linked to GEF financing of the project. PMC should be charged proportionately to focal areas based on focal area project grant amount.

power generation		renewable energy (RE) power generation increased	scheme tailored to support small, decentralized RE investments by building on the already-operational National Energy Efficiency and Renewable Energy Account (NEEREA), with completed implementation of selected pilot and demonstration projects. 1.2 Developed complementary funding scheme that can continue to facilitate RE investments after the project ends, leveraging funding through climate finance (NAMAs, voluntary carbon market) and other sources			
Establish-ment of an enabling policy framework	TA	An enforced supportive policy and regulatory environment for attracting investments for privately owned, grid-connected power generation by RE sources	2.1 Completed analysis of possible technical constraints associated with connecting new decentralized RE power generation units onto the grid 2.2 Updated and harmonized technical guidelines for connecting small decentralized RE plants onto the grid and for ensuring their problem-free operation. 2.3 Finalized proposal and draft legal/regulatory package to complement the already-initiated amendments to Law #462, which besides net-metering would allow small decentralized RE producers to sell any	GEF TF	214,000	1,180,000

			excess electricity to the grid, addressing issues such as required licences, purchase obligations of the utility, mechanisms for administering and setting national feed-in tariffs and other possible financial and/or fiscal support mechanisms. 2.4 Enhanced knowledge of the cost efficiency of different RE and EE measures at the macroeconomic and final consumer level 2.5 Amended construction and building management norms to promote increased application of different solar energy technologies in buildings' energy supply			
Market monitoring and quality control	TA	Monitoring and quality control for RE-based decentralized power generation established and operational	3.1 Completed public awareness-raising campaigns, seminars and published and disseminated stakeholder group-specific technical guides, handbooks and other related training materials on the design, evaluation, financing, installation, operation and maintenance of the targeted RE technologies 3.2 Adopted and operational quality control scheme with related market surveillance and enforcement mechanisms for both the targeted RE	GEF TF	263,500	911,000

			products and installations 3.3 Completed complementary training and other capacity development programmes for professional groups that are directly affected by the proposed quality control schemes 3.4 Agreed methodology and institutional arrangements for market monitoring 3.5 Annual market monitoring reports on the installed capacity and electricity produced by renewable energy and the institutional and financial arrangements in place to continue the market monitoring after the project 3.6 Regularly updated project website and interactive online training tool that can continue to operate after the project			
	(select)			(select)		
	(select)			(select)		
	(select)			(select)		
	(select)			(select)		
	(select)			(select)		
	(select)			(select)		
	(select)			(select)		
			Subtotal		1,377,500	10,916,000
			Project management Cost[5]	GEF TF	72,500	700,000
			Total project costs		1450000	11616000

[5] Same as footnote #4.

C. SOURCES OF CONFIRMED COFINANCING FOR THE PROJECT BY SOURCE AND BY NAME ($)

Sources of Co-financing	Name of Co-financier (source)	Type of Cofinancing	Cofinancing Amount ($)
National Government	Ministry of Energy and Water / Central Bank of Lebanon	Soft Loan	4,600,000
National Government	Ministry of Energy and Water	In-Kind	500,000
GEF Agency	UNDP	Grant	125,000
GEF Agency	CEDRO (UNDP)	Grant	4,200,000
GEF Agency	MED-SOLAR (UNDP)	Grant	1,537,000
GEF Agency	Low Emission Capacity Building, LECB (UNDP)	Grant	320,000
GEF Agency	Climate Change Coordination Unit	Grant	200,000
Bilateral Aid Agency (ies)	Transenergie (French Government)	Grant	134,000
(select)		(select)	
(select)		(select)	
Total Co-financing			11,616,000

D. GEF/LDCF/SCCF/NPIF RESOURCES REQUESTED BY AGENCY, FOCAL AREA AND COUNTRY[1]

GEF Agency	Type of Trust Fund	Focal Area	Country Name/ Global	(in $)		
				Grant Amount (a)	Agency Fee (b)[2]	Total c=a+b
UNDP	GEF TF	Climate Change	Lebanon	1,450,000	145,000	1,595,000
(select)	(select)	(select)				0
(select)	(select)	(select)				0
(select)	(select)	(select)				0
(select)	(select)	(select)				0
(select)	(select)	(select)				0
(select)	(select)	(select)				0
(select)	(select)	(select)				0
(select)	(select)	(select)				0
(select)	(select)	(select)				0
Total Grant Resources				1,450,000	145,000	1,595,000

E. CONSULTANTS WORKING FOR TECHNICAL ASSISTANCE COMPONENTS:

Component	Estimated Person Weeks	Grant Amount ($)	Cofinancing ($)	Project Total ($)
Local consultants*	226.00	206,000		206,000
International consultants*	24.00	94,000		94,000
Total		300,000	0	300,000

* Details to be provided in Annex C.

F. PROJECT MANAGEMENT COST

Cost Items	Total Estimated Person Weeks/Months	Grant Amount ($)	Co-financing ($)	Project Total ($)
Local consultants*	424.85	71,250	442,000	513,250
International consultants*	45.00	0	180,000	180,000
Office facilities, equipment, vehicles and communications*		0	38,000	38,000
Travel*		1,250	40,000	41,250
Others**	Specify "Others" (1)			0
	Specify "Others" (2)			0
Total		72,500	700,000	772,500

* Details to be provided in Annex C. ** For others, to be clearly specified by overwriting fields *(1) and *(2).

G. DOES THE PROJECT INCLUDE A "NON-GRANT" INSTRUMENT? No

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

H. DESCRIBE THE BUDGETED M &E PLAN:

Project monitoring and evaluation will be conducted in accordance with the established standard UNDP and GEF procedures. For further details, please see Section 5 of the UNDP project document.

PART II: PROJECT JUSTIFICATION

A. DESCRIPTION OF THE CONSISTENCY OF THE PROJECT WITH:

A.1.1. The GEF focal area/LDCF/SCCF strategies/*NPIF Initiative*:

The project contributes to GEF Climate Change Focal Area Objective #3 to "Promote Investment in Renewable Energy Technologies", recognizing that renewable energy plays an indispensable role not only in combating global climate change but also in addressing energy access, energy security, environmental pollution and sustainable development. In accordance with the adopted strategy, the GEF support under this objective will expand beyond the creation of enabling policy and regulatory environment and will also endeavour to invest in renewable energy projects that will lead to a step change in the deployment and diffusion of reliable, least-cost renewable energy technologies. In addition, the GEF project will promote local SMEs to enhance their technical capacities to provide installation, operation and maintenance services for renewable energy technologies.

The specific outcomes of the GEF V climate change strategy that the project is addressing include:

- Favourable policy and regulatory environment created for renewable energy investments
- Investment in renewable energy technologies increased
- GHG emissions avoided

A.1.2. For projects funded from LDCF/SCCF: the LDCF/SCCF eligibility criteria and priorities:

Not applicable

A.1.3 For projects funded from NPIF, relevant eligibility criteria and priorities of the Fund:

Not applicable

A.2. National strategies and plans or reports and assessments under relevant conventions, if applicable, i.e. NAPAS, NAPs, NBSAPs, national communications, TNAs, NIPs, PRSPs, NPFE, etc.:

The objective of the project is consistent with the voluntary commitment of the Government of Lebanon made in

2009 in Copenhagen to reach a target of meeting 12% of all electricity and thermal energy needs in Lebanon from renewable energy sources by 2020. It is further supported by the policy papers released after the 2009 commitment, such as the Policy Paper for Electricity Sector Development in 2010 and the National Energy Efficiency Action Plan in 2011.

The Policy Paper released by the Ministry of Energy and Water (MEW) in June 2010 represents a hitherto unprecedented effort in Lebanon to present a well elaborated strategy and implementation programme to address the current power sector problems in Lebanon with concrete and quantified targets to be achieved in the short, medium and long term. These targets are discussed in further detail in section 1.2 of the project document and section B. 1 of this CEO Endorsement Request. Other proposed measures in the Policy Paper include the establishment of a smart grid and the already-established National Energy Efficiency and Renewable Energy Account (NEEREA) as a financing mechanism to support energy efficiency and renewable energy investments. The Policy Paper also encourages private sector involvement and the promotion of green buildings.

During a meeting of the Council of Ministers on 10 November 2011, the Lebanese Government officially adopted the Lebanese National Energy Efficiency Action Plan (NEEAP) (Decision No. 26) for the years 2011-2015. The NEEAP is the first comprehensive strategy in energy efficiency and renewable energy adopted by the Lebanese Government. The adoption of the NEEAP makes Lebanon the first country to take this step out of 22 Arab countries. With its 14 national initiatives, the adopted NEEAP paves the way for a structured approach towards achieving the national target of 12% renewable energy by 2020. Among its objectives, the NEEAP calls for the development of solar, wind, and hydro energy; the adoption of the energy conservation law; the banning of incandescent lamps; and the development of financing mechanisms for renewable energy and energy efficiency projects, including net-metering. In furtherance of the NEEAP, on December 22nd 2011, Electricité du Liban (EdL, the state utility), the Ministry of Energy and Water and the Ministry of Finance announced that net-metering is now applicable in Lebanon, available to residential, commercial and industrial customers.

The proposed project also contributes to the targets outlined in Lebanon's Second National Communication (SNC), submitted to the UNFCCC COP in February 2011, including the already-mentioned voluntary 12% RE commitment, which was followed up by a Ministerial Declaration and the Policy Paper for Electricity Sector Development in 2010 and the adoption of the NEEAP in 2011. Together with the Ministry of Environment's proposed policy to continue "greening" all production sectors, these provide the basis for expansion of clean energy production at all levels.

B. PROJECT OVERVIEW:

B.1. Describe the baseline project and the problem that it seeks to address:

Lebanon is suffering from severe power shortage. The combined power generation capacity and imports in Lebanon in 2011 amounted to 1,500 MW, while the average demand was 2,400 MW, with a peak in the summer of 2,800 MW. The estimated total energy demand in 2011 was 17,120 GWh (a 7% increase from 2010), whereas total electricity production and purchases amounted to only 11,000 GWh. Due to this deficit, the greater Beirut area suffers from power cuts for 3 hours per day on average, and the whole country for about 8.6 hours per day.

The average power generation costs of Lebanon's electric power utility, EdL (Electricité du Liban), were estimated at 17.14 US cents per kWh in 2009, while the frequent power cuts have forced the population to rely on even more expensive back-up arrangements, typically consisting of diesel generators. According to World Bank estimates, about one-third of Lebanon's total electricity demand is currently met by these privately-owned small diesel generators, with typical costs of around 30 US cents per kWh.

In order to overcome the acute power shortage, the MEW Policy Paper has set a target to increase the total available power generation capacity in Lebanon to 4,000 MW by 2014 and to 5,000 MW after that. This is mostly to be achieved by new and rehabilitated gas-fired power plants. For the installation of new renewable energy power generation capacity, the target has been set at 115-165 MW, including new hydro (40 MW), wind (60-100 MW) and waste to energy (15-25 MW). No construction has yet begun on any of these renewable energy plants, however.

Although not directly addressed by the MEW Policy Paper, the potential for smaller, decentralized renewable energy power generation can, with some support, become an important complementary source of power to help the

population to cope with the current power shortages in Lebanon. In many areas with frequent black-outs or no electricity supply by the grid, small RE applications can provide an attractive alternative to commonly-used small diesel generators. Such opportunities can be provided by PV, wind, small hydro and organic waste, depending on the location and the natural resources available.

Some early experiences from small, decentralized RE power generation have already been collected by the ongoing UNDP CEDRO project, funded by the Government of Spain. This project has facilitated the installation of PV-systems in 26 public schools and community centers in Akkar, Bekaa and the South of Lebanon, with sizes of 1.2-1.8 kWp each. In 2013, the installation of 9 additional PV projects, 4 PV and micro-wind hybrid projects and one micro-hydro project is foreseen with CEDRO support. These systems will be monitored for their performance and, thus, will add to the knowledge to be built during the implementation of the proposed GEF project. The CEDRO project has also supported the finalization of a wind atlas for Lebanon and was instrumental in the 2011 decision by EdL and the Government to allow net-metering in Lebanon

For expediting and sustaining the growth of the decentralized RE market in Lebanon, the main identified support needs are in the area of: i) facilitating the implementation of supportive policy measures outlined in the MEW policy paper and the NEEAP such as net-metering, supportive feed-in tariffs and required amendments to the Law # 462 to allow the sale of electricity to the grid by private small RE generators; ii) facilitating the move from 100% grant-financed pilot projects implemented under the CEDRO project to more sustainable financing models and leveraging new sources of financing such as climate finance through NAMAs; and iii) strengthening the local supply-side capacity to sell, install and maintain the systems, and ensuring that adequate quality control mechanisms will be in place to sustain the market. These complementary support needs are further elaborated in Section B.2 below as well as in the Project Framework in Table B of Part I of this CEO Endorsement Request.

The initial financial analysis undertaken during project preparation has indicated that with the current PV system costs of about $5,500 per kWp in Lebanon (reduced from $15,000 per kWp for the first complete autonomous PV systems financed by CEDRO in 2009), the costs of electricity generated by PV without any grant support, but with a 0% interest loan provided by NEEREA, could be in the range of 0.26-0.37 $ per kWh depending on the expected lifetime and other assumptions used in the calculations (for further details, see section 1.3 of the project document). With a 25% GEF grant contribution, these costs could be reduced to 0.22 -0.30 $/kWh. For grid-connected PV systems without battery storage, the average power generation costs with expected 25-year lifetime and 0% interest loans could reach as low as 0.11 $ per kWh.

The figures above are to be compared with the current 0.30 $/kWh electricity costs of small diesel generators typically used in Lebanon to cover the black-outs on the EdL grid, the estimated generation costs of EdL of 0.17-0.21 $/kWh and the expected EdL consumer tariff increase from the current 0.10 to 0.14 $/kWh by 2015.

Taking into account the above, it is evident that some additional grant support is still required to make the purchase of PV and other targeted small RE systems sufficiently attractive for the targeted clients. With expected further price reductions along the observed global trend, the growing size of the local market and related supply chain development that is expected to result from the initial market support, however, the costs of small decentralized RE electricity generation in attractive locations will in the future not be very different from the listed baseline options and will have a realistic chance to grow even without any additional grant support. After demonstrating the feasibility of small decentralized RE-based electricity generation together with net metering, it should also be in EDL's / Government of Lebanon's interest to further support this technology area – for example, by paying the difference between the prevailing consumer tariff and EdL's own generation costs.

B. 2. Incremental /Additional cost reasoning: describe the incremental (GEF Trust Fund/NPIF) or additional (LDCF/SCCF) activities requested for GEF/LDCF/SCCF/NPIF financing and the associated global environmental benefits (GEF Trust Fund) or associated adaptation benefits (LDCF/SCCF) to be delivered by the project:

The project will catalyze the development of the small, decentralized grid-connected renewable energy (RE) power generation market in Lebanon. The target is to facilitate the installation of at least 1.75 MW of new decentralized RE power generation capacity during the lifetime of the project, resulting in direct GHG reduction benefits of approximately 35,500 tonnes of CO_{2eq}. Complementary indirect mitigation benefits are expected from the sustained market growth of decentralized RE power generation after the project and from paving the way for larger RE power

plants – for example, by clarifying the technical and institutional aspects of connecting RE-based intermittent power generation sources onto the grid and leveraging financing for RE investments from new sources such as climate finance. This indirect GHG reduction impact of the project has been estimated to range from 317,000 tonnes up to over 1.7 million tonnes of CO_{2eq} depending on the assumptions made.

The penetration of RE in the Lebanese energy mix first of all depends on its economic merits relative to those of alternative energy sources. At the consumer level, RE cannot yet compete with the costs of grid electricity, as the EdL consumer tariffs are controlled by the Government and do not even cover EdL's own production costs. In the private back-up electricity supply, however, the situation is different. Despite the Government's efforts to restore regular power supply, the need for private back-up generators for meeting the demand and securing adequate operating reserve is likely to continue for several years to come. Therefore, the initial focus of the project will be on promoting renewable energy as an alternative – or complementary – energy source to private diesel generators, which currently dominate the back-up power generation market. Once the regular power supply and grid stability are restored, and in the course of further developing the net-metering scheme and the related tariffs, the already-installed RE systems can continue to operate and the market can further develop on the basis of a fully grid-integrated approach.

The project is structured to deliver three outcomes as follows. For each outcome, the incrementality of the GEF project is discussed in the context of selected baseline projects, which consist of the initiatives that have been or will be working towards a similar goal.

Outcome 1: Investments in decentralized renewable energy power generation increased

The activities under this component focus on supporting actual investments and sustaining market growth. In co-operation with the key stakeholders such as MoEW, EdL, the Ministry of Finance and other donors, the GEF project will structure and leverage funding for attractive financing conditions for the RE investments under consideration.

The proposed pilot/demonstration projects aim to facilitate the development of decentralized RE systems using PV, wind, small hydro and/or biogas and any combination thereof. The first targeted investors will include private businesses and industrial complexes, universities, tourist resorts, bakeries, etc., all of which depend on continuous and reliable electricity supply. Representatives of these entities interviewed during the project preparation phase indicated strong interest in new RE-based back-up electricity generation systems, should they be able to reduce the costs of current diesel-based systems.

While the costs of many RE technologies, and PV in particular, have fallen rapidly over the past several years, some complementary financial and/or fiscal incentives are typically still required to make the investment attractive enough for the targeted investors. This support can be provided through: i) direct capital grants, interest rate subsidies, tax concessions or premium feed-in tariffs supported by the state budget; ii) spreading the costs of premium feed-in tariffs for RE across the overall energy production costs, for instance through minimum RE purchase obligations by the utilities; and/or iii) creating additional revenue streams for investors, for example through climate finance.

By starting with the implementation of selected pilot/demonstration projects supported jointly by the GEF and the project's co-financing resources, the activities will gradually move to leveraging more sustainable financing. The main co-financing source at the beginning will be the National Energy Efficiency and Renewable Energy Account (NEEREA), launched in 2010 by the Central Bank of Lebanon (BdL). This financing initiative is implemented by local commercial banks while the Lebanese Centre for Energy Conservation (LCEC) serves as the technical arm evaluating the projects and providing other technical support. With financial resources leveraged from the Ministry of Finance and the EU, the commercial banks are able to offer loans for energy efficiency and renewable energy investments with a risk guarantee, 0% interest rate and loan maturity up to 14 years. To date, 12 projects have been approved through the NEEREA programme with an overall budget of $17 million, and around 20 other projects are in the pipeline. All of these projects are related to energy conservation measures for a range of sectors, including new residential and hotel buildings, hospitals, orphanage centres, etc. No renewable energy projects have yet been financed with NEEREA loans.

In order to boost the decentralized RE market in Lebanon, the GEF financing in Outcome 1 will be used as complementary grant co-financing to leverage NEEREA and other funding for the early market development of small RE investments. While the ongoing EU-funded CEDRO 3 project has been financing public sector RE projects on a 100% grant basis, the proposed GEF project complemented by the other new UNDP-managed projects, MED-

SOLAR and CEDRO 4, will complement this effort by facilitating a gradual move from entirely grant-financed RE projects to a more sustainable financing model which also increasingly engages the private sector to finance these investments. With further market maturity, expected price reductions of RE systems and adjustment of electricity tariffs to reflect the true production and marginal costs of electricity generation, a gradual move entirely out of grants can eventually take place. This is still going to take some time, however. As such, the incrementality of the GEF funding derives from the fact that a NEEREA loan alone (although very soft) will likely still not attract significant investor interest; topped up by a complementary GEF grant, the investment will become sufficiently attractive.

The stakeholder consultations during the project preparatory phase with a number of prospective investors who expressed interest in RE systems confirmed that a mix of 0% interest rate loans and grants up to 25% would be seen as feasible and attractive for them. The size of the projects could run up to 200 kWp – i.e. around $1 million in investments for the biggest projects. As the projects granted with UNDP-GEF support will be selected on a competitive basis under a public tender, no further client-specific elaboration of the projects has been undertaken at this stage. The average costs of electricity produced with diesel generators were found to be around US 30 cents per kWh, for which PV, for example, can provide a competitive alternative or complementary energy source with the financing conditions discussed above.

The maximum share of the GEF grant will be limited to 25% of the total investment and up to $150,000 per project, so as to catalyse a sufficient number of demonstration projects under implementation. All electricity-generating small-scale RE technologies, including PV, wind, micro-hydro or biogas, are eligible for support. The ranking of projects will be done by the "best value for money" approach, in which the projects requesting the smallest grant contribution per the projected kWh to be generated are prioritized for support. For the first round of proposals, specific quotas may also be introduced for different types of RE technologies so as to enhance the demonstration aspect. Should there be no qualified proposals for certain type of technology, however, the funds will be reallocated to other types of RE, for which the demand for support may be higher.

Further guidance on the required technical specifications, quality assurance and calculation of the annual yield in a comparable manner is provided in the tender documents, which are to be finalized at the outset of project operations. Beside the financial evaluation, all the projects will be subject to technical due diligence and approval by the LCEC and verification of the proper installation and performance of the system during the commissioning stage before release of the grant. The investors receiving support are also expected to commit themselves to collect and share with the UNDP-GEF project team monthly performance data of the installed systems for the duration of the GEF project, which then can be used for further public awareness-raising and research activities.

By building on the visibility, demonstrated benefits and verified performance of the projects financed by the combined private sector funding, NEEREA loans and complementary GEF and other grant financing, the project will provide a basis for the establishment of a longer-term financing mechanism, which can sustain market growth after the project. For this, the project will approach new financing sources, including eventual complementary Government and donor grant funding, and facilitate the development of a proposal for a RE-based NAMA, in co-operation with the UNDP Low Emission Capacity Building (LECB) project funded by the EU and the German Federal Environment Ministry (BMU). While the GEF funding will contribute to the conceptualization and financial analysis of the RE technologies, policies and other supporting measures proposed for the NAMA, the LECB project will cover the costs of the development of the actual NAMA proposal, including in-depth baseline analysis, elaboration of the institutional arrangements for the implementation of the NAMA and development of the MRV (Monitoring, Reporting and Verification) plan (including integration with a national greenhouse gas inventory system). In addition, in the final year of GEF project implementation (2017), a comprehensive review of market-based financing options for renewable energy will be undertaken. It is expected that the transition away from pure grant-funding for renewable energy investments towards more sustainable business models will have been sufficiently accelerated by the GEF project by then to open up new market opportunities. Potential performance-related emission reduction payments in the context of the NAMA developed under the GEF project (and associated co-financiers) will also be explored. To help foster implementation of the identified viable market-based or performance-based instruments, the GEF project will organize discussions with the Government of Lebanon and potential financiers to identify ways in which such instruments can be implemented after the end of the project, with support from potential financiers to be identified during the implementation of the project.

Outcome 2: A supportive policy and regulatory environment enforced for attracting investments for privately-owned, grid-connected renewable energy power generation

The activities under the project component that will deliver Outcome 2 will support the establishment of an enabling legal and regulatory framework to attract investment for privately-owned, grid-connected power generation by renewable energy sources. While the adopted Government strategy sets the overall targets for renewable energy, the topics to be addressed by more detailed laws and/or regulations and the related supporting documents include: i) updated and harmonized technical guidelines for connecting different types of RE plants onto the grid by private producers and for ensuring problem-free operation of these plants; ii) the conditions for selling electricity to the grid by private producers, addressing issues such as required licences, purchase obligations of the utility, mechanisms for administering and setting feed-in tariffs at the national level and other possible financial and/or fiscal support mechanisms; iii) net/smart-metering and eventual changes required in the construction norms and other building regulations to facilitate better integration of renewable energy into buildings' energy supply; iv) quality control of the products and services available in the market (including installation and other after-sale services); and v) sample documents to guide the project developers and investors to apply for the required operation licences, financial/fiscal support, etc.

The project will support the required background analysis, consultations, awareness-raising and capacity building of the key stakeholders to allow the drafting of the new regulations and facilitate their effective adoption and implementation. It will build on and improve the initial analysis done in the framework of the CEDRO project and will also benefit from the results and conclusions of a number of international projects that have been doing research on the typical legal, regulatory and bureaucratic barriers to successful development of the small decantralized RE market. As examples of the work done in EU countries, the EU-supported PV LEGAL and the new PV GRID projects are noteworthy. For any legal and regulatory recommendations and the grid access studies in Lebanon, the project will closely co-operate and co-ordinate its activities also with the new EU MED-SOLAR project and the ongoing Mediterranean Solar Plan project.

For any policy work, the cost-efficiency analysis of different RE technologies requires regular updating as both RE costs and other framework conditions are evolving rapidly. Regularly upated market analysis to provide this information will be done as a part of the project's market monitoring activities under Outcome 3.

Outcome 3: Monitoring and quality control of RE-based decentralized power generation introduced and sustained

The activities of this outcome will focus on: i) raising the awareness of the targeted stakeholders on what decentralized RE power generation systems can offer to them; ii) ensuring the quality of the products and installations through an effective quality control system, increased consumer awareness and supply-side capacity building; and iii) establishing an agreed market monitoring methodology and mechanism to keep track of the annual sales and installed capacity of PV and other small decentralized RE systems in Lebanon as well as of their costs and annual contribution to the overall electricity supply.

While some market monitoring activities have been, and are planned to be, implemented by the CEDRO project, this has not been done in a systematic way and has not yet been institutionalized to ensure its sustainability. For quality control, the GEF-funded solar water heating project has been developing a quality management scheme for solar thermal systems, but for other RE technologies no quality control schemes and mechanisms are currently under development. No quality control-related criteria are yet included in NEEREA either. All of these gaps will be addressed under Outcome 3 of this project.

The technology-specific requirements for the performance and durability of the targeted RE technologies and their installation to meet the required quality criteria will be developed at the outset of project operations together with a certification and market surveillance plan applicable for the Lebanese market. Some initial remarks and recommendations in this respect are that:

- Mandatory minimum energy performance and quality requirements for the entire market should rely on well-elaborated, technology-specific market surveillance plans, which are to be enforced by supporting legislation and adequately capacitated market surveillance authorities;
- A voluntary quality control scheme can be promoted: for instance, by embedding the agreed minimum performance and other quality requirements into the eligibility criteria of the available financial support schemes.

The suppliers can prove their products to meet the requirements by means of a certificate issued by an accredited authority either abroad or in Lebanon. For the quality control of installations, an in-country certification and inspection scheme will be required;

- A Quality control scheme without associated training of the key stakeholders such as public authorities to implement that scheme and the local service providers such as installers to match the minimum quality requirements is likely to be ineffective. Therefore, an essential part of the activities under Outcome 3 will be to facilitate the training of the key stakeholders. For this, the project needs to co-operate closely with the local universities and professional and vocational schools to ensure that, for instance, sufficient numbers of trained and certified small RE system installers will be available in the market to provide their services.

The work on the quality control of electricity-generating small RE systems in Lebanon can build on the development of quality control schemes for solar water heating systems undertaken in the context of the ongoing UNDP-GEF solar water heating project and other related initiatives. Furthermore, it can build on the international work already done in this field, such as the development of the IEC (International Electrotechnical Commission) standards 61215 and 61646 for Design Qualification and Type Approval of Crystalline Silicon and Thin-Film PV modules and the related certification schemes of the IECEE, IEC standard series 61400 for small wind turbines, Task 27 of the IEA wind energy programme on “Providing a standard consumer label for small wind turbines” and others. In developing a quality control scheme for installations, the project can take advantage of the research, training materials, manuals and expert networks developed, among others, under the EU-supported international Qualicert scheme (implemented in 2009-2011) and the ongoing PVTRIN project.

During project implementation, the experiences and lessons-learned from developing and implementing the quality control scheme for solar thermal systems under the GEF-supported solar thermal project in Lebanon will be closely monitored and taken into account, together with the experiences and lessons-learned in other countries. The need to intensify efforts on quality control of both SWH systems and installation was one of the key recommendations that emerged from the Mid-Term Evaluation of the ongoing SWH project, thereby further highlighting the importance of this component to sustainable market development.

For enhancing the testing and related training opportunities, the project contains a small budget for the purchase of monitoring and testing equipment. In that context, a more detailed evaluation of testing facilities at Lebanese universities will be carried out for finding synergies and opportunities for co-operation and for avoiding duplication of activities. The extension of the current SWH testing facility in the Lebanese Industrial Research Institute to cover PV may also be considered, subject to the progress and results achieved with the SWH testing.

Emphasis throughout will be placed on post-project sustainability – on building the capacity of the local supply-side to sell, install and maintain the systems, support the establishment of an adequate quality control scheme to ensure satisfactory consumer experience with the new technology, and a market monitoring mechanism to track progress and facilitiate ongoing targeted support for the sector. A more detailed list of the outputs contributing to this and the other outcomes is presented in Part I, table B of this CEO Endorsement Request

B.3. Describe the socioeconomic benefits to be delivered by the Project at the national and local levels, including consideration of gender dimensions, and how these will support the achievement of global environment benefits (GEF Trust Fund/NPIF) or adaptation benefits (LDCF/SCCF). As a background information, read Mainstreaming Gender at the GEF.":

The main socioeconomic benefits of the project stem from improving the electricity supply in areas that currently suffer from severe power shortages and black-outs. Furthermore, meeting the project market development objective can create new jobs in selling, installation and maintenance of the RE systems. The potential for this has been estimated at about 80 new jobs per installed MWp for PV and up to new 4,000 jobs in the entire RE sector, should the Government target to increase the share of renewable energy to 12% by 2020 be achieved. This would constitute about 0.3% of the total Lebanese workforce.

Positive RE market development will provide new work opportunities for women, who until now have remained relatively marginal actors in this sector. Improved, lower cost electricity supply from renewables for different household appliances may also improve women’s quality of life at home, especially in the rural areas where electricity supply is very intermittent. Accurate disaggregated gender data are not available from Lebanese

renewable energy studies at the moment, but this will be further addressed during project implementation by identifying gender-sensitive factors and impacts that may affect the success of any particular activity or RE technology.

B.4 Indicate risks, including climate change risks that might prevent the project objectives from being achieved, and if possible, propose measures that address these risks to be further developed during the project design:

The main identified risks to the successful implementation of the project include:

Political – Government failure to adopt the required legal and regulatory changes, such as the required amendments to the Law 462, changes in the EdL tariffs and the financial/fiscal incentives to provide a basis for the proposed market promotion activities.

Political – Sustainability of the adopted financial incentives and other supporting measures to maintain investors' confidence: i.e. the need to avoid damaging "stop–go–stop" dynamics.

Technology risk – Technical failures either due to equipment failure or bad installation, leading to loss of trust by targeted customers on the performance of small, decentralized RE applications.

Financial Risks – Government and/or other donors will not provide support and funds for new financing instruments; falling oil prices and/or rising RE prices would negatively affect the cost-efficiency of RE versus fossil fuel-based power generation.

Lack of adequate and reliable market data to facilitate the monitoring of project impacts and planning of further policy measures.

Inadequate and/or non-capacitated human resources to successfully implement the project and support the mainstreaming of its results.

Further details on these risks, with their probability and impact analysis and related mitigation measures, are presented in the "Offline Risk Log" in Annex 7-1 of the project document.

For addressing the project management risks, a committed, full-time project manager with adequate outreach and networking skills is absolutely essential for the success of the activities. He/she should have an ability: i) to engage the key stakeholders in constructive discussion about future RE development needs in Lebanon; ii) to guide and supervise the studies done and effectively co-operate with the international experts who are engaged to support this work; iii) to present their findings and recommendations in a convincing manner to key policy-makers and opinion leaders by taking into account the main macroeconomic and policy drivers for local energy sector development; and iv) to identify areas of future work. During project implementation, the project manager also needs to be supported by qualified technical and legal experts.

A typical risk for different training and capacity building activities is that, after the completion of training, there will be no real demand for the services of the trained experts. The integrated approach adopted by the project is expected to mitigate this risk by combining the training with concrete possibilities to apply the new skills in practice for the planned demonstration projects and their envisaged replication.

B.5. Identify key stakeholders involved in the project including the private sector, civil society organizations, local and indigenous communities, and their respective roles, as applicable:

The Ministry of Energy and Water (MEW) is the Government body responsible for energy sector development in Lebanon. It consists of 9 General Directorates, among which "Electicité du Liban" (EdL), the Directorate of Investment, the Directorate of Hydraulic & Electric Resources, and the Directorate of Oil are considered to be the main directorates in the energy sector. The MEW will be the national executing agency of the project.

The Lebanese Centre for Energy Conservation (LCEC), established as a result of the LCECP GEF project and supported by UNDP, has become a focal point for energy efficiency and renewable energy related initiatives in the country. Affiliated to the Lebanese Ministry of Energy and Water, the LCEC is directly supporting the Government of Lebanon to develop and implement national strategies that promote the development of efficient and rational uses of energy and the use of renewable energy at the consumer level. The LCEC has also been nominated by the Government (in November 2011) to be the national energy agency of Lebanon; it serves as the technical support unit for the implementation of NEEREA; and is the Executive Secretariat of Lebanon's National Steering

Committee for the Mediterranean Solar Plan. For the implementation of this new GEF project, the LCEC will provide technical backstopping, including technical due diligence of the RE investment projects submitted for NEEREA financing.

The Ministry of Environment (MoE) was established after the 1992 Rio Earth Summit and its mandate and organizational structure were amended after the 2002 Johannesburg Summit to also include coordination of sustainable development issues in Lebanon. It also serves as the GEF Operational Focal Point of the country.

The Ministry of Finance has a stake in elaborating any possible financial or fiscal incentives and funding schemes supported by the Government of Lebanon.

The Directorate General of Urban Planning within the Ministry of Public Works and Transport is the responsible Government body for the execution of the Building Law and for granting construction permits in Lebanon. In 2005, the Directorate General of Urban Planning, with the collaboration of UNDP in Lebanon, developed new Thermal Standards for Buildings, but their formal adoption as mandatory for all new buildings is still pending. The Directorate General is currently co-operating with the World Bank to upgrade the environmental performance of the Lebanese Building Code, with a link to decentralized RE applications, as part of the "Green Building" scheme.

The LIBNOR (Lebanese Standards Institute) is a public organization responsible for the development of national standards in Lebanon and the issuance of the Lebanese Conformity Mark "Normes Lebanaise" (NL). LIBNOR is, therefore, expected to participate in, and contribute to, the development of any quality control schemes.

The IRI (Industrial Research Institute) is a semi-public institute responsible for quality control, equipment and goods compliance with the adopted norms, testing and certifications for all manufactured and imported goods. IRI has an essential role to regulate the Lebanese market for all imported energy efficiency and solar thermal equipment in close collaboration with LCEC. Thus far, only a SWH testing facility has been developed.

The Order of Engineers and Architects (OEA) is responsible for organizing architectural and engineering works in Lebanon and for building permits. Recently, the OEA has reached an agreement with mechanical engineers to provide voluntary design drawings for solar water heaters in villas and houses to be included in the building permit application.

The Lebanese Solar Energy Society (LSES) is an NGO that includes renewable energy experts (consultants, manufacturers, traders, academics, etc.) with the main objective of promoting solar thermal systems in Lebanon through collaboration with other stakeholders. LSES has recently acquired a truck demonstration facility with a small wind turbine, SWH and PV systems, which is used for demonstration purposes at schools.

The Association Libanaise pour la Maitrise de l'Energie (ALME) is an NGO with experts in renewable energy (consultants, contractors, traders, academics, etc.). ALME has a principal objective of promoting renewable energy in Lebanon. ALME has been involved in several SWH projects as well as studies and research.

Universities in Lebanon can play an important role in promoting small RE applications by developing and hosting RE training courses as well as supporting research by engineers to gain theoretical experience in RE. The American University of Beirut has an active energy centre, a graduate programme in energy studies and advanced energy labs which can be developed to become testing labs for certification purposes.

B.6. Explain how cost-effectiveness is reflected in the project design:

Cost-effectiveness is reflected in the project design by the foreseen co-financing and co-operation arrangements with other projects, thereby multiplying the impact that can be achieved with the GEF resources alone. Through successful implementation, the project will also facilitate a gradual move from entirely grant-financed pilot/demonstration projects to more sustainable financing models, including increasing private sector financing and the use of the available loan instruments such as NEEREA. Complementary financing for supporting small decentralized RE investments is sought to be leveraged from climate finance such as NAMAs, thereby further enhancing the project impact.

The GEF grant will be limited to a maximum share of 25% of the total investment and up to $150,000 per project, so as to catalyse a sufficient number of demonstration projects under implementation. The ranking of projects will be done by the "best value for money" approach, in which the projects requesting the smallest grant contribution

per the projected kWh to be generated are prioritized for support.

The combined direct and indirect global benefits of the project have been assessed at over 350,000 tonnes of CO_2eq. With a GEF funding request of US$1.45 million, this corresponds to an abatement cost of less than US$4.5 per tonne of CO_2 reduced.

B.7. Outline the coordination with other related initiatives:

The main areas of co-ordination with the other related initiatives such as: i) the ongoing CEDRO 3 project financed by the Government of Spain as a part of the Lebanon Recovery Fund and its planned follow-up phase (CEDRO 4); ii) the new EU supported MED-SOLAR project; iii) the National Energy Efficiency and Renewable Energy Account (NEEREA) jointly established and supported by the Central Bank of Lebanon, UNDP and the EU; and iv) the new UNDP "Low Emission Capacity Building Program (LECB) supported by the EU and the German Federal Environmental Ministry have been discussed in section B.2 (Incremental / Additional Reasoning) and, therefore, are not repeated here.

The Energy and Environment Unit of UNDP Lebanon is directly managing or is otherwise closely involved in the implementation of all the activities above, which facilitates full co-ordination and effective exchange of information at the practical level. This will optimize the use of the resources and avoid duplication of efforts. All the projects listed above also contribute co-financing to the GEF project.

In addition to the above, the GEF project will build on the results and co-ordinate its activities with the EU-funded regional project "Paving the Way to the Mediterranean Solar Plan" (PWMSP), which is assisting Mediterranean Partner Countries to increase the deployment of sustainable energy systems based on renewable energy sources. The project started on September 1, 2010 for a duration of 3 years and with a total budget of €4.6 million. Results achieved so far include: i) National Road Maps for legal and regulatory reform have been finalized and approved for all Mediterranean Partner Countries; ii) a Regional Road Map for legal and regulatory reform has been finalized and approved; iii) an assessment of needs for a programme on knowledge transfer and training has been developed; iv) a survey on research and development centres and activities has been conducted; v) benchmarking reports on sustainable energy policy have been developed; vi) project reports on financing for the MSP have been developed; and vii) country reports on infrastructure needs for the MSP have been finalized. The results achieved so far by the PWMSP can contribute to further policy work under outcome 2 of the GEF project and to the overall strategy of increasing the deployment of RE sources in Lebanon (including both large- and small-scale RE plants).

The success of the recently-completed GEF-funded UNDP energy efficiency (LCECP) project in Lebanon provides an excellent basis from which to broaden activities to renewable energy by building on the already-existing institutional co-ordination arrangements and trust created by this project among key stakeholders. The groundwork done, for instance, in supporting the establishment of the National Energy Efficiency and Renewable Energy Account, by raising the general public awareness on energy efficiency and renewable energy, and by using innovative and progressive approaches for projects' public awareness and marketing activities can be used as a basis and model of good practices for the new GEF project.

For organizing public awareness-raising, supply-side capacity building and quality control, experiences and lessons-learned can be drawn from the ongoing GEF-funded UNDP Solar Water Heaters project, which is currently proceeding well in Lebanon.

To ensure stakeholder coordination, the project will organize meetings and consultative workshops with the principal actors in the renewable energy sector as well as representatives from civil sector organizations, including municipalities and local authorities. Stakeholders will participate in roundtable discussions in the presence of the project, decision-makers and relevant ministries, thereby ensuring that all concerns are taken into consideration when developing policy recommendations.

C. GEF AGENCY INFORMATION:

C.1 Confirm the co-financing amount the GEF agency brings to the project:

The UNDP Country Office in Lebanon will provide US$125,000 cash co-financing to this project in the form of TRAC (core) resources. This represents more than 10% of the Country Office's entire TRAC resources.

Complementary co-financing, amounting to US$6,257,000 in total, is provided by projects implemented through UNDP's account and managed by UNDP. These projects include the ongoing CEDRO project funded by the Government of Spain and its expected follow-up phase, the new MED-SOLAR project funded by EU Cross-Border Co-Operation within the European Neighborhood and Partnership Instrument (ENPI), and the new Low Emission Capacity Building (LECB) project funded by the by the EU and the German Federal Environmental Ministry.

C.2 How does the project fit into the GEF agency's program (reflected in documents such as UNDAF, CAS, etc.) and staff capacity in the country to follow up project implementation:

UNDP has a proven track record of being one of the leading agencies in Lebanon to promote the renewable energy and energy efficiency agenda. Successful implementation of the UNDP-GEF LCECP project and the institutional capacities created by that project have facilitated the incorporation of a number of energy efficiency and renewable energy measures into the current energy sector strategy of the Government of Lebanon.

The UNDAF and the UNDP Country Programme Action Plan (CPAP) both reflect the Government of Lebanon's and UN Country Team's focus on responding to climate change at the national level as well as to meet Lebanon's need for increased energy supply. Output 5.2.1 of the UNDAF specifically targets the development and adoption of a national sustainable energy strategy to mitigate climate change. Given that UNDP is the lead agency on this output, the project will build towards meeting this target. Furthermore, Output 5.2.4 aims at increasing awareness about the effects of climate change among the general public; a component of the proposed project will directly contribute towards this Output.

Given the above, the proposed new GEF project to promote decentralized RE power generation can be seen as highly complementary to UNDP's ongoing activities and strategic priorities in Lebanon. Consisting mainly of TA-type activities and complemented by an already established, external financing mechanism, the proposed project is also in full accordance with the type of activities where UNDP is seen to have a comparative advantage among the GEF implementing agencies.

The Energy and Environment Programme in the UNDP Country Office consists of 3 dedicated staff members, who oversee the implementation of projects in the field and ensure sound quality control, monitoring and evaluation of activities. Furthermore, specialized team leaders work in the field – including a National Communication Project Manager based at the Ministry of Environment, a Solar Water Heaters/Energy Conservation Expert who leads the energy project at the Ministry of Energy and Water, and a Renewable Energy and Economics Specialist who leads the CEDRO project along with 3 site engineers. Through close coordination of these initiatives with the proposed new project, the knowledge and expertise accumulated under these projects will be readily available to the new project. The Heads of Operations, Finance, HR and POS in the Country Office will assure compliance with the overall standards of UNDP, and the UNDP Resident Representative will liaise with the highest levels of government and will negotiate key policy and institutional changes proposed by the project. Furthermore, the project will be backstopped by a Regional Technical Advisor based in UNDP's Regional Centre in Bratislava, Slovakia.

PART III: INSTITUTIONAL COORDINATION AND SUPPORT

A. INSTITUTIONAL ARRANGEMENT:

Not applicable (no other GEF agency involved in the implementation of the project)

B. PROJECT IMPLEMENTATION ARRANGEMENT:

The project will be nationally executed by the Ministry of Energy and Water of the Government of Lebanon and implemented by UNDP through the National Implementation (NIM) modality. UNDP will be accountable for the disbursement of funds and the achievement of the project goals, according to the approved work plan. The executing agency will assign a senior officer as a National Focal Point to: i) coordinate the project activities with activities of other Government entities; and ii) certify that the expenditures are in line with approved budgets and work-plans.

UNDP will hire a Project Manager who will be responsible to the Project Board for the implementation of the project, including: i) managing and ensuring the delivery of project outputs in line with the budgets and work plans; ii) drafting detailed work plans and terms of reference; iii) facilitating, monitoring and reporting on the procurement of inputs and delivery of outputs; iv) approving the Terms of Reference for consultants and tender documents for sub-contracted inputs; and v) reporting to UNDP on project delivery and impact.

A Project Steering Committee (Project Board) will be established at the inception of the project to monitor project progress, to guide project implementation and to support the project in achieving its listed outputs and outcomes. It will be chaired by the UNDP and include the National Focal Point from the Ministry of Energy and Water, the Council for Development and Reconstruction (CDR) and representatives of the main stakeholders such as the Ministry of Finance and EdL. Other members can be invited at the decision of the PSC on an as-needed basis, but taking due regard that the PSC remains sufficiently lean to be operationally effective. The final list of the PSC members will be completed at the outset of project operations and presented in the Inception Report by taking into account the envisaged role of different parties in the PSC. The project manager will participate as a non-voting member in the PSC meetings and will also be responsible for compiling a summary report of the discussions and conclusions of each meeting.

The day-to-day management of the project will be carried out by a Project Management Unit (PMU) under the overall guidance of the Project Steering Committee. The PMU will be established within the Ministry of Energy and Water and will coordinate its work with the Lebanese Center for Energy Conservation (LCEC). The Project Manager will report to UNDP, the executing agency and the PSC. The Terms of Reference of the key project personnel are presented in Section IV, Part IV of the Project Document. The project personnel will be selected on a competitive basis in accordance with the relevant UNDP rules and procedures and in consultation with the UNDP-GEF Regional Technical Adviser.

The project manager will be supported by international and national experts taking the lead in the implementation of specific technical assistance components of the project. Contacts with experts and institutions in other countries that have already gained experience in developing and implementing renewable energy policies and financial support mechanisms are also to be established.

UNDP Lebanon will maintain the oversight and management of the overall project budget. It will be responsible for monitoring project implementation, timely reporting of the progress to the UNDP Regional Centre in Bratislava and the GEF as well as organizing mandatory and possible complementary reviews and evaluations on an as-needed basis. It will also support the executing agency in the procurement of the required expert services and other project inputs and administer the required contracts. Furthermore, it will support coordination and networking with other related initiatives and institutions in the country.

For successfully reaching the objective and outcomes of the project, it is essential that the progress of different project components are closely monitored both by the key local stakeholders and authorities as well as by the project's international experts, starting with the finalization of the detailed, component-specific work plans and implementation arrangements and continuing through the project's implementation phase. The purpose of this detailed work planning is to facilitate early identification of possible risks to successful completion of the project together with adaptive

management and early corrective actions, when needed.

PART IV: EXPLAIN THE ALIGNMENT OF PROJECT DESIGN WITH THE ORIGINAL PIF

The project objective, all outcomes, most outputs and the overall project strategy are identical to the original PIF approved in February 2012, but outputs 1.2, 2.2 and 2.3 have been slightly reformulated to better reflect the identified priority needs and the expectations of what, with adequate certainty, the project can deliver by the end of its duration.

The structure of the project co-financing was reviewed and somewhat altered during project preparation by limiting the anticipated co-financing of CEDRO to only those activities that will take place from 2013 onwards, including the new CEDRO 4 project. New co-financing for the planned pilot/demonstration projects and the supporting TA activities was also obtained from the recently-approved EU-funded MED-SOLAR project and the UNDP Low Emission Capacity Building (LECB) project funded by the EU and the German Federal Environment Ministry (BMU). As a result, the overall cost-sharing ratio slightly exceeds the one given in the PIF and there is a greater diversity of co-financiers to contribute to this cost sharing. Some reallocation of the requested financing for different project components was also made to better reflect the recognized needs. The total funding request to the GEF remains consistent with the PIF.

Due to further falls in RE investment costs, and to PV costs in particular, the end-of-project target for direct impact was increased from the previous 1 MWp (as stated in the PIF) to 1.75 MWp of new installed RE capacity. For GHG emission reduction, the corresponding target for the direct impact of the project was increased from the previous 17 ktonnes of CO_{2eq} to 35.5 ktonnes of CO_{2eq} resulting from the increased capacity target and the increased expected lifetime of the investment from the previous 15 years to 20 years. The rationale for this is discussed in further detail in annex 7.4 of the project document. The baseline emission factor in the same analysis was reduced from the previous 0.8 kg of CO_2 per kWh produced used in the PIF to 0.7 kg of CO_2 per kWh produced for the years 2013-2017 (corresponding to the average emission factor of electricity produced by diesel generators), after which the baseline emission factor will gradually start to decline to 0.46 kg of CO_2 per kWh produced (corresponding to the expected average grid emission factor in the situation where adequate electricity supply by the grid has been restored through new capacity additions and where natural gas is entering into use as the primary fuel in all larger thermal power plants operating in Lebanon).

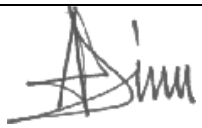
PART V: APPROVAL/ENDORSEMENT BY GEF OPERATIONAL FOCAL POINT(S) AND GEF AGENCY(IES)

A. RECORD OF ENDORSEMENT OF GEF OPERATIONAL FOCAL POINT(S) ON BEHALF OF THE GOVERNMENT(S):): (Please attach the Operational Focal Point endorsement letter(s) with this template. For SGP, use this OFP endorsement letter).

NAME	POSITION	MINISTRY	DATE *(MM/dd/yyyy)*
H.E. Mr. Nazim El Khoury	Minister	MINISTRY OF ENVIRONMENT	12/22/2011

B. GEF AGENCY(IES) CERTIFICATION

This request has been prepared in accordance with GEF/LDCF/SCCF/NPIF policies and procedures and meets the GEF/LDCF/SCCF/NPIF criteria for CEO endorsement/approval of project.

Agency Coordinator, Agency Name	Signature	Date *(Month, day, year)*	Project Contact Person	Telephone	Email Address
Adriana Dinu UNDP/ GEF Officer-in-Charge & Deputy Executive Coordinator		July 2, 2013	Robert Kelly, Regional Technical Advisor EITT	+421 915 725 069	Robert.kelly@undp.org

ANNEX A: PROJECT RESULTS FRAMEWORK

This project will contribute to achieving the following Country Programme Outcome as defined in the CPAP or CPD:					
Country Programme Outcome Indicators:					
Primary applicable Key Environment and Sustainable Development Key Result Area (same as that on the cover page, circle one): 1. Mainstreaming environment and energy OR **2. Catalyzing environmental finance** OR 3. Promote climate change adaptation OR 4. Expanding access to environmental and energy services for the poor.					
Applicable GEF Focal Area Objective: GEF-5 FA Objective # 3 (CCM-3): "Promote Investment in Renewable Energy Technologies"					
	Indicator	**Baseline**	**Targets** **End of Project**	**Source of verification**	**Risks and Assumptions**
Project Objective[6] Reducing greenhouse gas emissions by the removal of barriers to widespread application of decentralized renewable energy based power generation.	Amount of reduced CO_2 emissions by the investments facilitated by the project	0	Direct: 35.5 ktonnes of CO_{2eq} over the 20-year default lifetime of the investments made during project implementation. Indirect: 317 ktonnes of CO_{2eq} over the 20 year default lifetime of the investments made within 10 years after the project end.	Project monitoring reports and final evaluation. As applicable, post-project market monitoring and evaluations	Adoption of a supportive regulatory framework for adequate feed-in tariffs, net metering, grid code and related financial incentives.
Outcome 1[7] Investments in decentralized renewable energy (RE) power generation increased	Volume of investments mobilized	0	US$8.75 million	Project monitoring reports and final evaluation.	As above

[6] *Objective (Atlas output) monitored quarterly ERBM and annually in APR/PIR*
[7] *All outcomes monitored annually in the APR/PIR. It is highly recommended not to have more than 4 outcomes.*

	Indicator	Baseline	Targets End of Project	Source of verification	Risks and Assumptions
Outcome 2 An enforced supportive policy and regulatory environment for attracting investments for privately owned, grid-connected power generation by RE sources	Extent to which RE policies and regulations are adopted and enforced	Regulations for feed-in tariffs and net metering under consideration	Net metering effectively implemented and complemented with other required regulations and/or guidance, including updated technical guidelines for grid connection as well as adopted standards and procedures for performance testing and quality control. Mechanism and guidelines for the implementation of feed-in-tariffs developed.	Project monitoring reports and final evaluation	The proposed legal and regulatory improvements passing swiftly through the Government approval process.
Outcome 3: Monitoring and quality control for RE-based decentralized power generation established and operational	Availability of annual market data; Verified customer satisfaction with the RE technologies in use	No adequate market monitoring and quality control mechanisms in place	Availability of annual market data for new sales, total installed capacity and net production of all main RE applications sold in Lebanon by March/April each year. Over 70% customer satisfaction on the RE installations undertaken.	Project reports Consumer surveys	Agreement reached with the key market players to regularly and timely submit the required data on time. Adequate quality control and certification scheme in place supported by the required institutional arrangements and legal provisions.

1.1. Project Outputs and Related Target(s) / Sub-target(s), as applicable

Outcome 1: Investments in decentralized renewable energy (RE) power generation increased.	**Outcome 2:** An enforced supportive policy and regulatory environment for attracting investments for privately owned, grid-connected power generation by RE sources.	**Outcome 3:** Monitoring and quality control for RE-based decentralized power generation established and operational
Output 1.1: Approved and operational financing scheme tailored to support small, decentralized RE investments for power generation by building on the already-operational National Energy Efficiency and Renewable Energy Account (NEEREA), with completed implementation of selected pilot and demonstration projects.	**Output 2.1**: Completed analysis of possible technical constraints associated with connecting new decentralized RE power generation units onto the grid.	**Output 3.1**: Completed public awareness-raising campaigns, seminars, published and disseminated stakeholder group-specific technical guides, handbooks and other related training materials on the design, evaluation, financing, installation, operation and maintenance of the targeted RE technologies.
Output 1.2: Developed complementary funding scheme that can continue to facilitate RE investments after the project ends, leveraging funding through climate finance (NAMAs, voluntary carbon market) and other sources.	**Output 2.2**: Updated and harmonized technical guidelines for connecting small decentralized RE plants onto the grid and for ensuring their problem-free operation.	**Output 3.2**: Adopted and operational quality control scheme with related market surveillance and enforcement mechanisms for both the targeted RE products and installations.
	Output 2.3: Finalized proposal and draft legal/regulatory package to complement the already-initiated amendments to Law #462, which besides net-metering would allow small decentralized RE producers to sell any excess electricity to the grid, addressing issues such as required licences, purchase obligations of the utility, mechanisms for administering and setting national feed-in tariffs and other possible financial and/or fiscal support mechanisms.	**Output 3.3**: Completed complementary training and other capacity development programmes for professional groups that are directly affected by the proposed quality control schemes.
		Output 3.4: Agreed methodology and institutional arrangements for market monitoring.
	Output 2.4: Enhanced knowledge of the cost efficiency of different RE and EE measures at the macroeconomic and final consumer level.	**Output 3.5**: Annual market monitoring reports on the installed capacity and electricity produced by renewable energy and the institutional and financial arrangements in place to continue the market monitoring after the project.
	Output 2.5: Amended construction and building management norms to promote increased application of different solar energy technologies in buildings' energy supply.	**Output 3.6:** Regularly updated project website and interactive online training tool that can continue to operate after the project.

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).

RESPONSE TO THE STAP REVIEW:

STAP Comments

The project aims at the removal of barriers to widespread application of decentralized renewable energy based power generation in Lebanon. STAP supports the project, however it suggests the following issues be addressed during project preparation and before CEO endorsement:

1. The project title states that decentralized renewable energy technologies will be promoted, and also on page 3 the PIF mentions wind, solar, hydro and biogas options. However, in the project framework only SPV is considered for policy formulation and demonstration. The rationale for focusing only on SPV in the project is not well justified.

2. The project is focused on small decentralized RE for power generation systems. Normally one associates small scale decentralized power system for decentralized and off grid applications. However, the PIF talks about only on-grid connection. The PIF also states that in Lebanon in many areas there is frequent black outs and no electricity supply from the grid. Thus, it may make sense to consider largely decentralized applications of power generated from decentralized systems.

3.Component 2.1 presents analysis of possible technical constraints for connecting decentralized RE systems to the grid. These technical specification and requirements are very well known and already used in many developing countries as well as most industrialized countries - and thus may not require any new analysis.

4. Costs of SPV electricity versus diesel based electricity: The PIF states that the cost of SPV-based electricity is lower than that from diesel-based generation. It is a surprising fact that diesel electricity could be costlier. In most countries, diesel electricity is cheaper than SPV. Please provide references.

5. Potential risks from possible high costs of SPV electricity needs to be addressed.

6. GEBs to be generated by the project are not entirely clear. If proposed decentralized PV and other potential RE sources will be utilized to substitute for small diesel generators, there would be a clear case for reduced GHG emissions. However, Lebanon is facing significant energy and electricity deficits and the proposed substitution for fossil-fuel generation might not happen at the expense of RE sources leading to no net GHG reduction benefits. How will project proponents ensure that the proposed substitution for RE sources does in fact take place? STAP recommends exploring in the project promotion of the combined diesel-PV systems possibly without storage capacity for cost reduction benefits or with a storage capacity if financial resources are available.

UNDP Response

1. In the project design, not only PV but also other types of small decentralized RE applications will be addressed by the planned policies and are included among the investments eligible for project support. This was the intention also at the PIF stage, but apparently this was not adequately highlighted in the PIF documentation. PV is likely to remain the most prominent of the RE technologies encompassed by the project, though, due to the fact that PV at the moment appears to have the largest market potential in Lebanon for small decentralized RE electricity generation. The reasons for this are the very attractive price development of PV during the past years, PV being less sensitive to site selection, and the favourable solar climate in Lebanon in general.

2. The reason for focusing mainly on on-grid applications is that close to 98% of all Lebanese households are connected to the public grid, although over 60% of them need to rely on private electricity networks as a secondary source of electricity due to current power shortage and related load-shedding. Thus, the situation in Lebanon is not similar to places with no grid access. It is also to be noted that while in the past PV may have been associated more with off-grid applications, today the vast majority of globally installed PV capacity is grid-connected. In Europe, for instance, off-grid applications currently represent less than 1% share of the total PV market (source: http://files.epia.org/files/Global-Market-Outlook-2016.pdf). In GEF client countries, the role of off-grid applications is

more significant, but cannot be considered as dominant either. Therefore, the market vision of the project in Lebanon is to start with decentralized, grid-connected RE applications as a substitute (or complementary energy source) to private diesel generators that at the moment are commonly used in Lebanon to cope with load-shedding. In practice, they work as off-grid applications when the grid is down, but in principle may also supply any excess energy to the grid when the grid is working. Later, and in the course of further development of the Lebanese power supply to match demand, the installed decentralized RE capacity can increasingly start to work as fully grid-connected systems, should this also be supported by the required policy measures. The expected lifetime of the panels is up to 25-30 years, so they remain useful even after the current power supply problems in Lebanon have been solved.

3. The technical analysis of output 2.1 will contribute to output 2.2.: i.e. finalization of the "updated and harmonized guidelines for connecting small decentralized RE plants onto the grid and for ensuring their problem-free operation". Without doubt, technical specifications and requirements for connecting small, decentralized RE plants onto the grid are well known and already used in many developing countries as well as in most industrialized countries, but this does not remove the need to adapt these technical specifications, requirements and guidelines to the specific characteristics of the Lebanese grid that the new RE plants are connected to. For instance, there are completely different system requirements and considerations to be taken into account when comparing a relatively stable grid with a highly unstable grid such as that in Lebanon. Obviously, the project does not need to start this analysis from scratch and it can build on the work already done in other countries, but some complementary analysis is still required to produce technical guidelines that match the specific situation in Lebanon and which can also be used as a reference by public authorities that are reviewing the applications for connecting small, decentralized RE plants to the grid without distorting the grid-balance. Cost-wise, this analysis does not present a major investment (a few tens of thousands of USD maximum) and is also foreseen to be partly funded by the project's co-financing resources.

4. The costs of SPV electricity versus diesel-based electricity obviously depend on many variables such as local solar and financing conditions and the price of diesel fuel, which vary from one country to another and from time to time. The prevailing situation during past years has been that, despite rapidly changing international oil prices, diesel-based electricity has, in most cases, indeed been cheaper than PV electricity. The situation in this respect has started to change, however. The continuing fall in international PV prices is already making PV very close to competitive with diesel-based electricity generation and, with favourable financing and good solar conditions, PV can become even cheaper. The assumptions and the results of the analysis undertaken for this purpose during the project preparatory phase are discussed in further detail in section B.1 of this CEO endorsement request and in chapter 1.3 of the project document.

5. The costs of SPV electricity have been taken into account in the financing strategy of the planned demonstration projects, with an assumption that with the current PV system investment costs in Lebanon and an up to 25% grant to complement the 0% interest loan of NEEREA this should make electricity generation with PV sufficiently attractive compared with a diesel-based alternative. For the future, it is true that one of the risks to be considered is that the observed favourable cost trend of PV will not continue. At the moment, however, no such scenario is evident. Projections for the cost development of different RE technologies have been presented, among others, in the cost analysis series of the International Renewable Energy Agency (IRENA - http://www.irena.org/Publications); on the basis of this and other international studies, it is anticipated that the costs of PV and other small RE technologies will, at a minimum, stay constant (i.e. not increase) in the future. Since all the calculations to justify the feasibility of the project have been made with current prices, the risk of PV becoming less economically feasible in the future than it is now is considered to be manageable. It is also to be noted that once the stability of the grid in Lebanon is restored, the possibility to leave energy storage systems out of the decentralized RE systems will significantly reduce the costs of the electricity generated by the renewable energy systems. Loans with lending conditions similar or close to those offered by NEEREA are expected to be available in Lebanon for some time, while the project will also work on leveraging additional financing to support the local RE market through climate finance and NAMAs. Furthermore, it is to be noted that the current electricity generation costs of EdL significantly exceed the tariff charged to consumers, which, together with the technical possibilities for net and other two-way metering, opens the way for a policy dialogue with the Government and EdL on specific feed-in tariffs that could be issued for any excess energy supplied to the grid by decentralized RE installations.

6. The current electricity deficit in the public power supply in Lebanon is mainly covered by diesel-based electricity generation connected to private grids and which the planned PV and other decentralized RE installations are foreseen to

substitute for. As such, it has been assumed that the installed RE systems will not significantly increase the total electricity supply, but will primarily provide an alternative to diesel-based electricity generation. For this to happen to the full extent is obviously difficult to guarantee in advance, but will be taken into account during project selection, monitored during project implementation and evaluated when reporting the actual impact of the project.

PV-diesel, wind-diesel or PV-wind hybrids are among the options to be considered and will also be eligible for project support with regard to the RE component. The hybrid approach would, indeed, reduce the need for (or size of) battery storage and thereby reduce the costs of RE-based electricity generation. A PV-diesel combination with large energy storage (comparable to a stand-alone RE system) does not appear to be a particularly attractive option from the cost-efficiency point of view and is thus not likely to be promoted.

RESPONSE TO THE COUNCIL MEMBER COMMENTS:

Comments of France

The project aims to combine technical assistance for creating an enabling policy environment and sustainable renewable energy services with support for developing and expanding the use of the financing mechanisms for the promotion of small, decentralized RE applications

The project is focused on small decentralized RE for power generation systems. Normally one associates small scale decentralized power system for decentralized and off grid applications. However, the PIF talks about only on-grid connection. The PIF also states that in Lebanon in many areas there is frequent black outs and no electricity supply from the grid. Thus, it may make sense to consider largely decentralized applications of power generated from decentralized systems.

Potential risks from possible high costs of SPV electricity needs to be addressed

UNDP Response: See the responses to the corresponding comments of the STAP review.

RESPONSE TO GEF SECRETARIAT COMMENTS (at time of CEO Endorsement):

Please elaborate on the modalities that have been put in place that will enable local banks in Lebanon to provide finance for decentralized renewable energy systems.

UNDP Response: For the project duration, the participation of local banks is primarily enabled by NEEREA, which is implemented by local commercial banks. With financial resources leveraged from the Ministry of Finance and the EU, the commercial banks are able to offer loans for energy efficiency and renewable energy investments with a risk guarantee, 0% interest rate and loan maturity up to 14 years. The Lebanese Centre for Energy Conservation (LCEC) serves as the technical arm, evaluating the projects and providing other technical support. During this process, the local banks will gain knowledge and experience of evaluating and financing RE investments for post-GEF project applications.

Please clarify why there has been no renewable energy projects financed under the National Energy Efficiency and Renewable Energy Account (NEEREA).

UNDP Response: This is illustrated in Figures 1.1 and 1.2 of the Project Document by considering the current consumer tariff of around 10 cents per kWh (not reflecting the actual generation costs) and the costs of private diesel generation at around 30 cents per kWh. Although very soft, the NEEREA financing alone does not yet make small RE investments, such as PV, sufficiently attractive in financial terms. Thus, the incrementality of the GEF funding derives from the fact that, topped up by a complementary GEF grant, the investment will become sufficiently attractive.
With further market maturity, expected price reductions of RE systems and adjustment of electricity tariffs to reflect true production and marginal costs, a gradual transition away from grants can eventually take place.

Please clarify how the financing provided under Component 1 will reduce the cost for decentralized renewable energy systems in the long-term. In other words, please clarify how this financing will eventually lead to a sustainable market for decentralized renewable energy systems in Lebanon.

UNDP Response: See the response above. The longer term cost reduction of small RE systems facilitated by financing provided under Component 1 is expected to primarily result from two factors:

- Gradually growing the market for small RE systems in Lebanon, attracting new market players and enhancing competition.
- Local banks and other financing entities will become more experienced in financing RE investments, which is expected to facilitate longer payback periods and reduce financing costs through a lower risk premium required for the loans.

The CEO Endorsement Request document says that the GEF funding will be limited to up to $150,000. Given that the grant is $750,000 for this component, is the number of RE projects five (= 750,000/150,000)? Please clarify.

UNDP Response: No, the number of projects is not limited to five, but can be more. The cap of $150,000 per project was included in the financing criteria in order to avoid a situation where 1-2 big projects would exhaust all available GEF resources. By means of the proposed $150,000 cap, the project can also reduce the overall financing risks and ensure that there will be a sufficient number of demonstration projects to support the project's public awareness raising, capacity building and marketing activities.

Please clarify whether the project idea is to displace completely (100%) diesel back-up systems with renewable energy sources.

UNDP Response: In the short term (for the project duration) 100% replacement of diesel back-up systems is not considered as realistic, as the total capacity of private diesel generators currently running in Lebanon has been estimated as close to 1,000 MW. In the longer term, however, at least the vast majority of the current diesel back-up systems could be replaced with RE. Obviously, this evolution also greatly depends on the progress in restoring the grid balance in Lebanon in general. At the site-specific level, RE systems are likely to first complement a diesel-based back-up system (if such a system is already owned by the investor), after which the RE share can start to gradually increase when old diesel units are taken out of active use.

Please clarify whether there are existing technical quality standards for renewable energy systems in Lebanon and how the project intends to build the enforcement capacity for these standards.

UNDP Response: There are standards for electrical and other safety-related issues but, with the exception of solar thermal applications, no other quality control standards (performance, durability, etc.) for RE systems have been developed or adopted in Lebanon yet. Building the enforcement capacity is primarily addressed under Component 3 of the project. The legal basis for quality control (under Component 2) needs to be strengthened first but, in parallel and subsequently, the project intends to build local implementation and enforcement capacity by (among others):

- Training local authorities on international experiences, best practices and lessons learned in developing and enforcing quality control of RE systems.
- Developing a market surveillance plan.
- In co-operation with local universities, and professional and vocational schools ensuring that sufficient numbers of trained professionals, such as certified small RE system installers, will be available in the market.
- Evaluating the need for, and feasibility of, a new testing facility and, as applicable, supporting the establishment of such a facility (in accordance with the provisions outlined in the Project Document).

A significant penetration of distributed renewable energy, especially solar PV could cause grid instability. Please explain how this project intends to overcome this problem and to assist the Government of Lebanon in dealing with this situation in the future in the event there is a large penetration of renewable energy in the grid.

UNDP Response: This issue is addressed under Component 2, Output 2.1: "Completed analysis of possible technical constraints associated with connecting new decentralized RE power generation units onto the grid". In this regard, the project will also take stock of the methodology and findings of completed and ongoing international studies, such as the recent report "Connecting to the Sun" published by the European Photovoltaic Industry Association (http://www.connectingthesun.eu), the EU funded PV-grid project (http://www.pvgrid.eu) and the studies and simulations undertaken in the framework of the IEA Wind Programme for connecting large amounts of wind power into the power system (http://www.ieawind.org).

We understand that the current financing model for renewable energy in Lebanon is 100% grant. The proposed project model goes a step further in terms of sustainability by mixing grant financing with soft-loans with attractive conditions. However, we would this project to assist with developing even a more sustainable financing model with even less grant and/or less attractive lending conditions. The idea is to move away from donor or government support while creating a sustainable market for renewable energy technologies in Lebanon. With this in mind, our suggestion for UNDP is to include an activity which will be implemented at the last year of the project to help Lebanon go even further in this direction.

UNDP Response: In the final year of GEF project implementation (2017), a comprehensive review of market-based financing options for renewable energy will be undertaken. It is expected that the transition away from pure grant-funding for renewable energy investments towards more sustainable business models will have been sufficiently accelerated by the GEF project by then to open up new market opportunities. Potential performance-related emission reduction payments in the context of the NAMA developed under the GEF project (and associated co-financiers) will also be explored. To help foster implementation of the identified viable market-based or performance-based instruments, the GEF project will organize discussions with the Government of Lebanon and potential financiers to identify ways in which such instruments can be implemented after the end of the project, with support from potential financiers to be identified during the implementation of the project.

ANNEX C: CONSULTANTS TO BE HIRED FOR THE PROJECT USING GEF/LDCF/SCCF/NPIF RESOURCES

Position Titles	*$/ Person Week**	*Estimated Person Weeks***	*Tasks To Be Performed*
For Project Management			
Local			
Project manager	1,425	50	Project management in accordance with the project document and the UNDP guidelines and procedures for nationally executed projects
International			
Justification for travel, if any: Required in-country travel of the project manager to facilitate effective implementation of the project			
For Technical Assistance			
Local			
Project engineer	875	160	Technical backstopping for, and supervision of, the various technical aspects of the project (further details in the draft ToR in the ProDoc)
Financial expert(s)	1,000	14	Macroeconomic and financial analysis of RE applications
Legal / regulatory expert(s)	1,000	26	Analysing and drafting required legal and regulatory changes
Public outreach and IT expert(s)	1,000	20	Preparation of information and training materials and supporting development of the web-based public outreach and training platforms
Evaluation expert(s)	1,000	6	Supporting the project evaluations and related stakeholder consultations, information collection and report drafting
International			
Technical project design and power system expert(s)	4,000	10	Supporting the review and further design of the proposed RE investment projects and the preparation of technical guidelines/norms for grid connection and operation of small RE systems with an unstable grid
Quality control and testing expert(s)	4,000	6	Supporting the development and launching of an applicable quality control scheme for small decentralized RE investments (incl. both hardware and installation)
Evaluation experts	3,750	8	Conduct a mid-term and final evaluation of

			the project in accordance with the specific UNDP/GEF M&E requirements.
Justification for travel, if any: The required travel includes the cost of international expert travel to and back from Lebanon and the required local travel by both the international and local consultants in Lebanon to visit, among others, the sites of the investments			

* Provide dollar rate per person week. ** Total person weeks needed to carry out the tasks.

ANNEX D: STATUS OF IMPLEMENTATION OF PROJECT PREPARATION ACTIVITIES AND THE USE OF FUNDS

A. EXPLAIN IF THE PPG OBJECTIVE HAS BEEN ACHIEVED THROUGH THE PPG ACTIVITIES UNDERTAKEN.

THE PPG OBJECTIVE WAS TO FINALIZE THE PROJECT DESIGN AND RELATED DOCUMENTATION FOR FINAL CEO ENDORSEMENT, WHICH HAS BEEN ACHIEVED BY THE PPG ACTIVITIES UNDERTAKEN.

B. DESCRIBE FINDINGS THAT MIGHT AFFECT THE PROJECT DESIGN OR ANY CONCERNS ON PROJECT IMPLEMENTATION, IF ANY:

NO PARTICULAR ADDITIONAL FINDINGS DURING PROJECT PREPARATION THAT WOULD RAISE CONCERNS

C. PROVIDE DETAILED FUNDING AMOUNT OF THE PPG ACTIVITIES AND THEIR IMPLEMENTATION STATUS IN THE TABLE BELOW:

Project Preparation Activities Approved	***Implementation Status***	***GEF/LDCF/SCCF/NPIF Amount ($)***				***Cofinancing ($)***
		Amount Approved	***Amount Spent Todate***	***Amount Committed***	***Uncommitted Amount****	
Conducting a more detailed market analysis for small decentralised RE applications	Completed	22,000	22,000			57,000
Stakeholder and project mapping exercise	Completed	16,000	16,000			46,000
Conduct of Logical Framework Analysis (LFA) workshop	Completed	2,000	1,500	500		12,000
Finalising the UNDP Project Document and CEO Endorsment Request with related additional analysis and information gathering	Completed	10,000	10,000			35,000
	(Select)					
	(Select)					
	(Select)					
	(Select)					
Total		50,000	49,500	500	0	150,000

* Any uncommitted amounts should be returned to the GEF Trust Fund. This is not a physical transfer of money, but achieved through reporting and netting out from disbursement request to Trustee. Please indicate expected date of refund transaction to Trustee.

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

Provide a calendar of expected reflows to the GEF/LDCF/SCCF/NPIF Trust Fund or to your Agency (and/or revolving fund that will be set up)

N/A