



# GEF-6 PROJECT IDENTIFICATION FORM (PIF)

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

For more information about GEF, visit [TheGEF.org](http://TheGEF.org)

## PART I: PROJECT INFORMATION

Project Title:	Equity Fund for the Small Projects Independent Power Producer Procurement Programme		
Country(ies):	South Africa	GEF Project ID: <sup>1</sup>	9085
GEF Agency(ies):	DBSA	GEF Agency Project ID:	
Other Executing Partner(s):	Department of Energy	Submission Date:	13 March 2015
GEF Focal Area(s):	Climate Change	Project Duration (Months)	48 months
Integrated Approach Pilot	IAP-Cities <input type="checkbox"/> IAP-Commodities <input type="checkbox"/> IAP-Food Security <input type="checkbox"/>	Corporate Program: SGP <input type="checkbox"/>	
Name of parent program:	[if applicable]	Agency Fee (\$)	1,350,000

### A. INDICATIVE FOCAL AREA STRATEGY FRAMEWORK AND OTHER PROGRAM STRATEGIES<sup>2</sup>

Objectives/Programs (Focal Areas, Integrated Approach Pilot, Corporate Programs)	Trust Fund	(in \$)	
		GEF Project Financing	Co-financing
CCM-1 Program 1 - Promote the timely development, demonstration and financing of low-carbon technologies and mitigation options	GEFTF	15,000,000	190,450,000
(select) (select) (select)	(select)		
(select) (select) (select)	(select)		
(select) (select) (select)	(select)		
(select) (select) (select)	(select)		
(select) (select) (select)	(select)		
Total Project Cost			

### B. INDICATIVE PROJECT DESCRIPTION SUMMARY

Project Objective: Removing Financial Barriers in the Small Scale Renewable Energy Projects: Establishment of an Equity Fund						
Project Components	Financing Type <sup>3</sup>	Project Outcomes	Project Outputs	Trust Fund	(in \$)	
					GEF Project Financing	Co-financing
Investment in Renewable Energy	Inv	Small scale RE energy market stimulated	Total RE installed	GEFTF	15,000,000	190,450,000
		Barriers to financing of SMEs in RE removed	Increased number of SMEs enabled to participate in RE industry			
			Financial mechanisms for low GHG emissions developed			
Subtotal					15,000,000	190,450,000
<b>Total Project Cost</b>					<b>15,000,000</b>	<b>190,450,000</b>

For multi-trust fund projects, provide the total amount of PMC in Table B, and indicate the split of PMC among the different trust funds here: ( )

<sup>1</sup> Project ID number will be assigned by GEFSEC and to be entered by Agency in subsequent document submissions.

<sup>2</sup> When completing Table A, refer to the excerpts on [GEF 6 Results Frameworks for GETF, LDCF and SCCF](#).

<sup>3</sup> Financing type can be either investment or technical assistance.

**C. INDICATIVE SOURCES OF CO-FINANCING FOR THE PROJECT BY NAME AND BY TYPE, IF AVAILABLE**

Sources of Co-financing	Name of Co-financier	Type of Co-financing	Amount (\$)
GEF Agency	DBSA	Loans	155,000,000
Donor Agency	KfW	Loans	15,000,000
Private Sector	SMEs	Equity	15,000,000
Donor Agency	KfW	Grants	5,450,000
(select)		(select)	
(select)		(select)	
<b>Total Co-financing</b>			190,450,000

**D. INDICATIVE TRUST FUND RESOURCES REQUESTED BY AGENCY(IES), COUNTRY(IES) AND THE PROGRAMMING OF FUNDS <sup>a)</sup>**

GEF Agency	Trust Fund	Country/ Regional/ Global	Focal Area	Programming of Funds	(in \$)		
					GEF Project Financing (a)	Agency Fee (b) <sup>b)</sup>	Total (c)=a+b
DBSA	GEFTF	South Africa	Climate Change	(select as applicable)	15,000,000	1,350,000	16,350,000
				PPG	200,000	18,000	218,000
(select)	(select)		(select)	(select as applicable)			
(select)	(select)		(select)	(select as applicable)			
<b>Total GEF Resources</b>					15,200,000	1,368,000	16,568,000

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

**E. PROJECT PREPARATION GRANT (PPG)<sup>4</sup>**

Is Project Preparation Grant requested? Yes  No  If no, skip item E.

**PPG AMOUNT REQUESTED BY AGENCY(IES), TRUST FUND, COUNTRY(IES) AND THE PROGRAMMING OF FUNDS**

Project Preparation Grant amount requested: \$200,000					PPG Agency Fee: 18,000		
GEF Agency	Trust Fund	Country/ Regional/Global	Focal Area	Programming of Funds	(in \$)		
					PPG (a)	Agency Fee <sup>5</sup> (b)	Total c = a + b
DBSA	GEF TF	South Africa	Climate Change	(select as applicable)	200,000	18,000	218,000
(select)	(select)		(select)	(select as applicable)			
(select)	(select)		(select)	(select as applicable)			
<b>Total PPG Amount</b>					<b>200,000</b>	<b>18,000</b>	<b>218,000</b>

<sup>4</sup> PPG requested amount is determined by the size of the GEF Project Financing (PF) as follows: Up to \$50k for PF up to \$2m (for MSP); up to \$100k for PF up to \$3m; \$150k for PF up to \$6m; \$200k for PF up to \$10m; and \$300k for PF above \$10m. On an exceptional basis, PPG amount may differ upon detailed discussion and justification with the GEFSEC.

<sup>5</sup> PPG fee percentage follows the percentage of the Agency fee over the GEF Project Financing amount requested.

## F. PROJECT'S TARGET CONTRIBUTIONS TO GLOBAL ENVIRONMENTAL BENEFITS<sup>6</sup>

Provide the expected project targets as appropriate.

Corporate Results	Replenishment Targets	Project Targets
4. Support to transformational shifts towards a low-emission and resilient development path	750 million tons of CO <sub>2e</sub> mitigated (include both direct and indirect)	5,000,000 tCO <sub>2</sub>

## **PART II: PROJECT JUSTIFICATION**

### **1. Project Description**

#### **1.1 The global environmental and/or adaptation problems, root causes and barriers that need to be addressed**

South Africa is a contributor to global climate change with GHG emissions resulting mainly from energy production and consumption. The country is heavily reliant on coal-based energy, 90% of electricity is produced mainly from this source. This dependence on coal continues to strain the country's efforts to reduce GHG emissions. South Africa's 2010 total GHG emissions including forestry and other land use (FOLU) were 518.2 million tonnes (Mt) carbon dioxide equivalent (CO<sub>2e</sub>). In the same period, the country's total GHG emissions excluding FOLU were 544.3 million tonnes tCO<sub>2e</sub>. Energy related emissions (fossil fuel combustion, transport and fugitive emissions), dominated South Africa's emissions profile, and contributed 75.1% of the total 2000-2010 emissions. The inventory revealed an increase in the energy and waste sectors. The energy sector continued to be the main contributor of GHG and was found to be a key category each year (i.e between 2000 and 2010). The energy intensity of the South African economy has resulted in an emissions profile that differs substantially from that of other developing countries at a similar stage of development. Eskom, the national power utility generates 96% of the electricity consumed in the country. Koeberg, a large nuclear station near Cape Town, provides about 5 percent of capacity and a further 5 percent is provided by hydroelectric and pumped storage schemes. In the period between 1994 and 200, no new generation capacity was installed. Combined with strong economic growth, rapid industrialisation and an otherwise ageing power plant fleet, Eskom's surplus capacity was reduced to below safe-production levels. In January 2008 the first power outages occurred nationwide. In reaction to this, South Africa has since embarked on an aggressive demand side management (DSM), energy efficiency, as well as planning new generation capacity building programmes. The new power generation capacity includes re-activation of 3 previously de-commissioned coal power stations, the construction of 2 very large new coal-fired power stations (Medupi and Kusile, with a 4800 MW capacity each), a long term nuclear expansion programme and procurement of 3 725MW of renewable energy under the Renewable Energy Independent Power Producer Programme (REIPPP) which includes the procurement of a total of 200 MW from small scale projects and Small and Medium Enterprises (SMEs).

South Africa has a high level of renewable energy potential and has recently revised its targets to about 17,000 MW, adopted by the Government in 2013 as part of the policy adjusted Integrated Resource Plan (IRP), a blueprint for the energy mix in the period up to 2030. This blueprint indicates the government's clear intention to not only diversify its energy mix away from the tradition of fossil fuel-fired power generation, but also to take advantage of the possibilities relating to the Green Economy in creating new industries and much needed jobs. The REIPPP is a component identified in the IRP, expected to ensure the generation of 3,725 MW by 2016.

It is expected that the above-mentioned renewable energy target of power generation would be achieved through participation of both large, small and medium players in the renewable energy industry. However, this has not been the case, since the programme has been dominated by the large players with very minimal participation of the smaller participants. While the bidding rounds for the large scale REIPPP have been very successful, the small scale REIPPP programme has not taken off. Even though financial markets have proven to be effective in the funding of the large renewable energy projects on a limited-recourse basis, there has been a lack of financing for

<sup>6</sup> Provide those indicator values in this table to the extent applicable to your proposed project. Progress in programming against these targets for the projects per the *Corporate Results Framework* in the *GEF-6 Programming Directions*, will be aggregated and reported during mid-term and at the conclusion of the replenishment period. There is no need to complete this table for climate adaptation projects financed solely through LDCF and/or SCCF.

similar, but small-scale, projects. In addition to these concerns, there are some major constraints/barriers to the participation of SMEs in the renewable energy market which include the following:

- a) Developers and equity investors in small projects often have limited access to funding from commercial banks. In addition SMEs have a limited track record, thus limiting their access to project finance.
- b) Due diligence efforts for the banks are more or less as costly for a small project as they are for the large. Therefore, from a developer's and a bank's point of view it is more cost effective to finance and implement large projects.
- c) The transaction (bid) costs involved in formulating bids are disproportionate to the investment returns achievable. Some of the REIPP programme's critics further argue that its significant up-front administrative requirements and high bid costs have contributed to high prices which also works against SMEs.
- d) Some of the legislative processes and requirements for small IPPPs are the same as for large players. Numerous regulatory approvals and consents and legislative constraints can function as a deterrent for small IPPs and SMEs and this also depresses the financial viability for small scale projects.

Small and Medium Enterprises play a very specific and crucial role in the South African economy. It is estimated that 91% of the formal business entities in South Africa are SMEs and that these enterprises contribute between 52 to 57% to GDP and account for approximately 61% of employment. Despite the acknowledged importance and SME contribution to economic growth, SMEs across the globe, and in South Africa in particular, are still faced with numerous challenges that inhibit entrepreneurial growth. The key challenge faced by SMEs in the South African market (including the renewable energy industry) is the inability to access financial resources, either in the form of equity or debt for both project preparation and implementation. External equity in the form of venture capital is usually not available for SMEs, primarily due to the relatively small levels of financing desired. The lack of external equity makes many SMEs dependent on bank loans and overdrafts and suppliers credit financing that is provided at commercially unattractive lending rates. Despite the dependence of SMEs on debt finance, access is still very limited for these players, especially in developing countries or economies in transition such as South Africa. Another important specificity of South African companies is the fact that many of them arise from Previously Disadvantaged Individuals (PDI) who, by definition, tend to have fewer resources (both technical and financially) at their disposal than the average first-world entrepreneur.

## **1.2 The baseline scenario or any associated baseline projects**

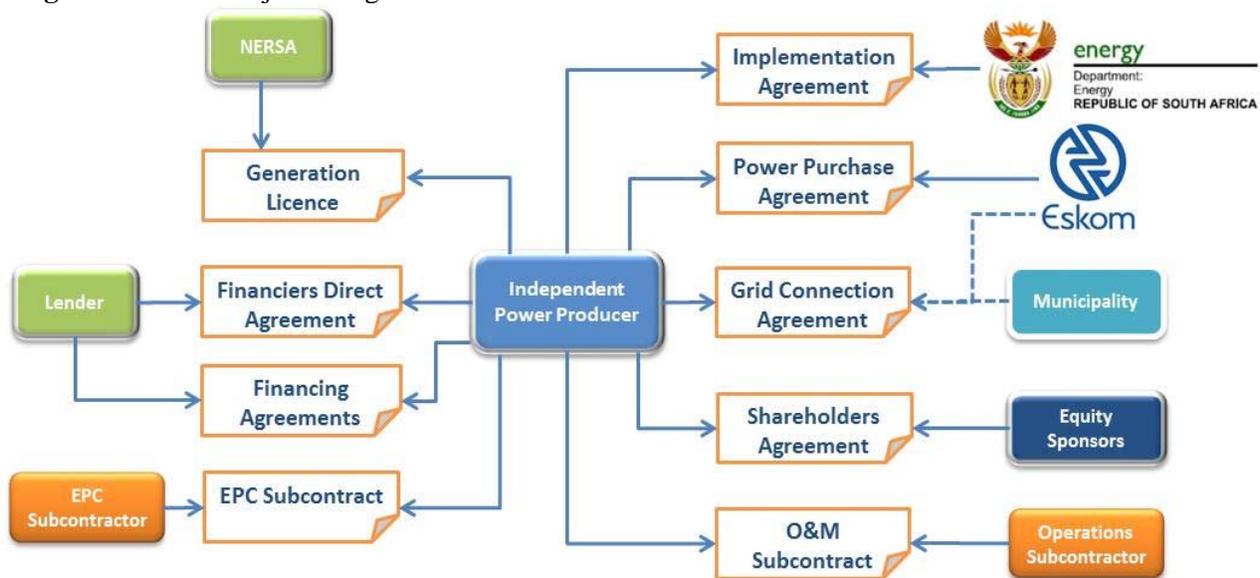
As mentioned above, the government, in response to the power shortage that has resulted in outages experienced since 2008, has embarked on aggressive demand side management (DSM), energy efficiency, as well as planning new generation capacity building programmes. It is obvious that the easiest option for government would be to reactivate and increase its coal-based plants in a bid to address the shortage of power, which threatens its economy. This is evident in the revamping of 3 decommissioned and the construction of 2 new power plants. These are all coal based and the 2 new projects alone will produce close to 10 000 MW. In so doing, the bold and good intentions of the state to transform to a green economy as well reducing its GHG footprint from the energy sector (which has been reported as being the main contributor ) are heavily strained. Though the large scale Renewable Energy Independent Power Producer Programme (REIPP), as one of the government's efforts to counter both its reliance on fossil fuels and increasing GHG emission trend, has been successful, it has not provided a conducive environment for the small scale players. As such, the small scale projects have not taken off. So far, the REIPP programme has been targeting large scale production of energy with specific focus on well-established (financially, institutionally and technically) private sector participants to the exclusion of the small and medium enterprises (SMEs) which seem short of these qualities. The lack of access to finance of SMEs has stifled the small scale RE energy market, yet they are characterized as the backbone of the economy, creating jobs and the lack of participation and installation of more RE megawatts, exacerbates the country's unpleasant trend of rising GHG emissions. SMEs have to a limited extent participated in the large scale REIPP value chain. Overall, the RE energy market remains slow in terms of growth and excludes key players. The government recently revised energy generation targets include IPP programmes in other sectors; coal and gas which target 2 500MW and 2 400MW respectively. Hence, it is clear from this baseline that the country may still face challenges in reducing increasing GHG emission trends in the energy sector.

### 1.3 The proposed alternative scenario, with a brief description of expected outcomes and components of the project

#### A. The Small Projects Independent Power Producers Programme

In realising the important role that SMEs play in the South African economy, as well as barriers that currently prevent this sector from growth and profitability, particularly in the RE sector, the government of South Africa has initiated several programs in a bid to address these obstacles. The intention is to ensure catalysation, optimisation and sustenance of their participation in the country’s socio-economic development process. The establishment of the Small Projects Independent Power Producers Programme (SP-IPPP) is a case in point. Further, the contribution of small scale projects to the national energy mix and particularly towards meeting the RE energy targets is expected to be achieved, amongst other initiatives, through this recently established SP-IPPP. The SP-IPPP was formally launched to the public by the government of South Africa through the line ministry, the Department of Energy (DoE) in August 2013 through the issue of a Request for Proposals (RFP). The Programme has been designed to procure energy generated from new small scale power generation facilities which have the capability to produce between 1–5MW in the form of Determinations 1 and 2 made by the Minister for Energy in 2011 and 2013 respectively. Accordingly under both Determinations, a total of 200 MW shall be procured from the small projects. Even though the Call for Proposals has been made, there has been no progress in terms of evaluation of bids; the government and its partners are in the process of establishing the implementation structures for this programme. The government of South Africa further intends, in the near future, to increase the allocation of small scale RE energy projects in the overall RE energy mix targets. Technologies which will be considered in the SP-IPPP include; onshore wind, solar photovoltaic, biomass, biogas, landfill gas and hydro. The diagram below reflects the institutional, legal and contractual project structure of the small projects under the programme.

**Diagram 1: Small Projects Programme Structure**



Source: Small Project IPP Procurement Programme Request for Information

#### B. The Facility for Investment in Renewable Small Transactions

In order to address the technical and financial barriers described above, that prevent SMEs to fully participate and grow in the RE market, the government of South Africa, through the Department of Energy, the Development Bank of Southern Africa (DBSA) and the KfW Development Bank (collectively; “Sponsors”), have derived a solution to design, structure and establish a Small Projects Independent Power

Producers (“SP-IPP”) Programme Fund managed by a Special Purpose Vehicle (SPV). The Fund is referred to as the Facility for Investment in Renewable Small Transactions (FIRST). The facility has the following objectives:

- (i) Providing debt funding to eligible projects under the small IPP programme, during their construction phase; and
- (ii) Once the projects reach commercial operation date, a securitization process will be followed (through the issue of Senior and Subordinated Notes in the Debt Capital Market (“DCM”) thereafter.

### C. The Small Projects Equity Fund

Despite the much commended initiative (FIRST) of the DBSA and its partners, highly supported by the government, it may still be argued that in the case of South Africa, SMEs will still struggle, and may not be able to raise their expected share of equity to participate in the Small IPP Programme. The objective of this proposal is to request a non-grant facility from the Global Environment Facility (GEF) to the value of US\$15,000,000 to establish and capitalize an Investment Equity Fund which will provide small projects with equity funding. The equity required from SMEs (without the proposed GEF resource) is , calculated at 10% of total funding requirements, assuming a gearing level of 90% debt from FIRST. In order to implement the small projects, FIRST is expected to provide 90% Senior Debt and the individual projects are expected to provide 10% equity. The GEF non-grant fund will provide SMEs with 50% of the expected equity contribution. The specific amounts and use of funds from both FIRST and Equity fund and total co-funding will be discussed in detail and PPG stage. Without GEF Funding, it is more likely than not that the renewable energy industry shall still be dominated by large scale international companies, with the exclusion of SMEs who are regarded as very important players in the country’s economy and may as well do so through participation in the renewable energy generation industry. Operationalisation of the proposed GEF financed Equity Fund shall be managed through the structure of the DBSA fund (FIRST) (please see diagram 2).

The rationale for establishing and Equity Fund is to enable the participation of SMEs in the renewable energy sector in line with the objectives of the Small Projects Independent Power Producers Programme. Raising of equity by these SMEs in the market is one of the fundamental challenges that have to date not been resolved by FIRST. The GEF resources will therefore afford SMEs access to equity funding at attractive rates. These industry players, if presented with a conducive environment, including access to finance, have the potential to change the renewable energy market; ensuring installation of more Megawatt power, creating green jobs and aiding South Africa’s efforts to reduce GHG emissions.

As indicated above, SME failure to access funding is attributed to a host of barriers including transaction (bid) costs being disproportionate to the investment returns achievable. The Equity Fund shall serve as a mechanism to address this barrier. In terms of available equity funding in the market, commercial lenders providing funding to the SMEs participating under the IPP Programme have a targeted return (nominal IRR) of 14%. This therefore reduces the SME’s nominal returns in the projects, discouraging many existing and potential small scale renewable energy players. Table 1 below outlines the proposed equity returns with and without the utilization of the GEF Funding.

Table 1: Equity returns

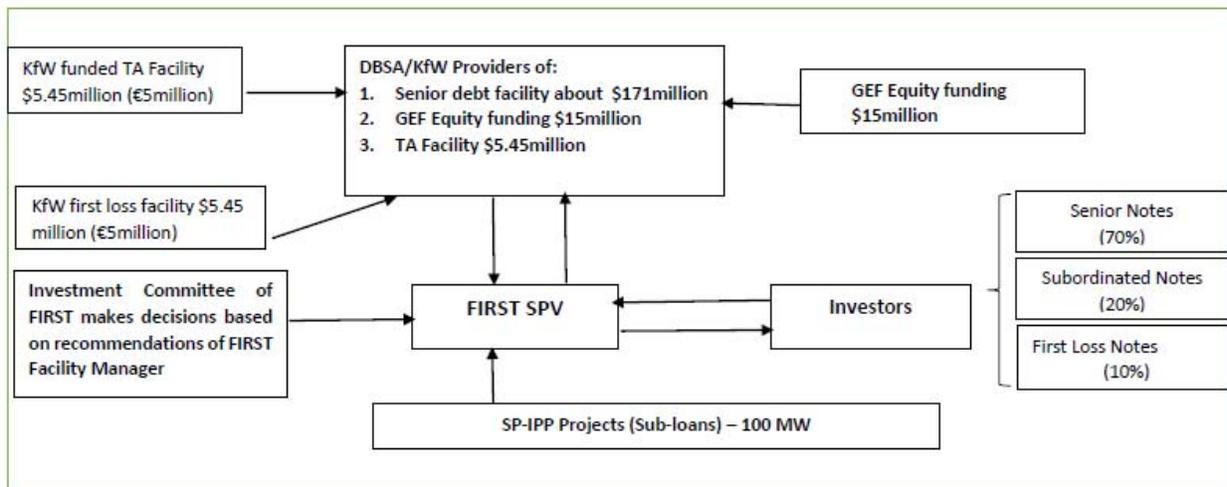
Scenario	Project Gearing (Debt: Equity)	Small Projects Sponsors Required Return	Commercial Equity Funders Required Returns	GEF Required Return
Baseline Scenario Without GEF Funding	90(Debt):10(Equity)	12%	14%	-
Alternative Scenario with GEF Funding	90(Debt): 5(GEF Equity Funding): 5 (Sponsor’s Equity)	16.5%-19%	-	6%

The calculations in Table 1 provide evidence that the proposed GEF funding will increase the financial viability of small scale projects. GEF equity funding will be repaid over a period of 5 years (assuming an expected minimum IRR of 6%), against a PPA term of 20 years. There is therefore a reserve/financing tail of 15 years for the GEF

Funding, thus mitigating repayment risk.. Annexures A, B and C provide illustrative schedules of cash reflows, including the payback period on the proposed GEF Equity Fund.

### The Programme Structure

The Diagram below outlines the proposed funding structure, incorporating the proposed GEF Equity Fund.



**Diagram 2:** SPIPP Programme Fund SPV Proposed Funding Structure

### Component 1 – Project Development Support

The Facility for Investment in Renewable Small Transactions will provide a Technical Assistance facility of US\$5,450,000 (€5 000 000) funded by KfW through the DBSA, to assist with the preparation and development of the small projects to reach bankable feasibility stage. The facility is sufficient to fund approximately 20 projects, assuming a co-funding of development costs of 70% (FIRST) and 30% (SMEs). The GEF funds will not be used for this component. Activities will include supporting the preparation of small renewable energy projects selected by the FIRST SPV to ensure that they are prepared for bid submission. This component will also include the financing of the standardisation of project and legal agreements for the FIRST SPV. The support that will be provided will be limited to bankable feasibility studies to optimise the success rate of projects at bid stage and thereby maximizing the chance for success of projects resulting in the actual installation of RE that will ensure contribution to GHG emissions reduction.

#### Component 1 Outcomes

- This exercise shall include a pipeline of bankable projects, ready for construction and implementation.
- Standardised legal and project agreements.
- Improved knowledge and skills transfer to SMEs

### Component 2 – Project Investment

The DBSA shall provide a debt facility of approximately US\$155,000,000 to FIRST, partially funded through the ZAR equivalent of a US\$15,000,000 facility which will be provided by KfW as a non-interest bearing loan. GEF funded Equity Fund will be used to provide affordable equity to SMEs, to enable them to provide to the debt Provider (i.e. FIRST) their required equity contributions in the Small Projects. Project investments shall be achieved through the utilization of funds from both FIRST (blended with KfW funds) and the proposed GEF capitalized Equity Fund as follows:

## 2.1 KfW Funded Investment Facility – will be utilised in the following manner;

- (i) *Up to the Securitisation Date*: the DBSA will use the KfW facility exclusively to blend it as a non-interest bearing loan with the DBSA Facility. This will assist with the reduction of the cost of funding to the small projects. The cost of funding margin offered to the SMEs will be reduced effectively by up to 30 basis points as a result of this facility.
- (ii) *After the Securitisation Date*: the DBSA will use the KfW facility to invest in the first loss notes to be issued by the Borrower. Together with the subordinated notes, the first loss notes are structured to provide a security mechanism for senior note investors and to ensure that senior notes are rated at Investment Grade by rating agencies in due course.

## 2.2 Facility for Investment in Renewable Small Transactions

- (i) FIRST shall utilize the debt and equity facilities to advance project finance loans and equity to individual Small scale IPP projects. The individual Small Project Developers shall approach the Facility Manager (please see proposed structure) in order to access the available funding facilities.
- (ii) Post Commercial Operation Date, the individual Small Projects, de-risked at that stage, will be bundled as a portfolio and rated by Credit Rating Agencies. The portfolio of loans receivable will be securitized and Notes issued to investors. The proceeds from the issue of the notes are to be used to repay the outstanding DBSA loan to FIRST at that stage. It is envisaged that the period from Financial Close to Commercial Operation Date/Securitisation Date will not be more than 12 months.
- (iii) The securitisation that will be used to repay the DBSA facilities will consist of Senior notes (70%) held by institutional investors and commercial banks, Sub-ordinated notes (20%) funded by DBSA and other local Development Financial Institutions and a first loss facility (10%) funded by DBSA through the KfW US\$15,000,000 (€14 000 000) facility.

It is the intention of the Project Sponsors (KfW, DBSA and the Department of Energy) that a competent and well experienced **Facility Manager** is appointed to pre-screen the projects together with the **FIRST Investment Committee**, upon which detailed due diligences will be performed on the shortlisted projects, in line with FIRST's Investment Policy.

## 2.3 Small Projects Equity Fund

The proposed GEF funding will serve the following functions;

- (i) Will be utilised to provide an equity instrument to small projects developers, with a targeted return of 6% (nominal) against an IRR return of 14% in the market.
- (ii) The positive impact is an increase in the small projects sponsors returns from 12% to 19%, thus making it more meaningful for the participation of SMEs in the renewable energy market in South Africa.
- (iii) Shall be repaid from dividend flows from the small projects (assuming P50 energy yield scenarios), assuming a 80% (GEF): 20% (Shareholders) dividend cash sweep mechanism.
- (iv) GEF Funding will be unsecured but the risk of non-repayment is considered low based on the robust project structure as articulated in the "Risks" section below.
- (v) GEF Funding will therefore provide additionality to the Programme by ensuring that there is a Broad Based participation of SMEs in the RE sector through the provision of Equity funding.

## Component 2 Outcomes

Financial barriers to the participation of SMEs in the RE energy sector shall be removed through an investment of over US\$190,000,000 and construction and implementation of 20 small scale RE projects resulting installation of about 100MW. Reductions in GHG emissions shall be achieved. Financial records of SMEs are expected to improve, skills and capacity enhanced and the small scale RE market shall grow. SMEs may participate in the large scale RE sector going forward. Removal of financial barriers to SMEs in the RE sector shall be achieved and financial mechanisms for funding small scale projects demonstrated successfully.

## **1.4 Incremental/additional Cost Reasoning and Expected Contributions from the Baseline and Co-financing**

As discussed, SMEs will still find it hard to raise equity despite the availability of debt funding from FIRST. It is concluded that without the GEF resources, the small scale renewable energy projects and SME project developers will continue to be excluded from participation in the market yet they are regarded as very important participants in the country's economy. Failure of SMEs to access debt and equity would compromise growth of the RE sector resulting in a suppressed environment and continue to jeopardise the country's mitigation efforts. Without the GEF proposed equity fund, the chances of success of the Small Scale IPP and the DBSA FIRST would be minimal. The GEF funds, through an accurate non-market distortion level of concessionality will enable the financing of some projects that would not happen without it. As indicated above, the failure of SMEs to access funding is attributed to a host of barriers including transaction (bid) costs being disproportionate to the investment returns achievable. It is evident from the analysis done (see table 1) that small scale projects that will be financed through the GEF capitalised Equity Fund shall realise a return that is higher than if they had been financed through commercial banks. Hence, it is assumed that the availability of this fund will attract and enable SMEs to participate in market. The fund will ensure removal of financial barriers and installation of RE that would have otherwise not happened. The proposed GEF financed Equity Fund will leverage about \$191,000,000 from private sector, bilateral donors and beneficiaries.

## **1.5 Global Environmental Benefits (GEFTF)**

The FIRST and the GEF component proposed here, by design, fall under Objective CCM-1 program number 1 and Outcome C of the GEF Climate Change Mitigation strategic priorities. The project's objective is to remove barriers to access to finance by SMEs in the RE market ensuring the funding of low carbon technologies which will result in strengthening of financial markets and mechanisms for low GHG development. The 20 project portfolio is assumed to be distributed as follows; 80% solar PV, 10% wind and 10% biogas. The GEF proposed Equity Fund and FIRST (blended with KfW funding) will inject US\$15,000,000 and close to US\$170,000,000 respectively which will result in installation of close to 100MW, reducing about 260,000 tCO<sub>2</sub> per year, extending to more than 5,000,000 tCO<sub>2</sub> over an assumed average project useful lifetime of 20 years based on the Eskom 5,753 GWh energy from a mix of solar PV, small-scale wind and biogas projects. The emissions reduction achieved through this project will contribute towards South Africa's target of reducing its GHG emissions by 34% below Business as Usual (BAU) before 2020 and by 42% BAU by 2025, as declared in the country's BUR.

Providing access to finance to SMEs and installations of small scale energy projects will demonstrate that this type of grid-connected projects can be financed on commercial terms. It will further open doors to increased commercial financing of this class of projects, expediting market acceptance of renewable energy projects and their positive impacts on GHG emissions reductions. It will further leverage funds from private sector and bilateral cooperating institutions in line with the objectives of the GEF-6 non-grant pilot which is expected to play a key role in supporting the GEF's efforts to leverage significant capital from the private sector through the use of innovative and flexible financial instruments, thereby helping stretch the GEF's limited resources and guiding the private sector towards more environmentally sustainable activities. It is also expected to have a high impact.

## **1.6 Socio-Economic Benefits**

As already indicated above, the government of South Africa views the SP-IPPP programme as an excellent opportunity to involve SMEs and new developers in the RE sector. The development of SMEs, including enterprises located in local communities (which is recognised through an adjustment, when calculating Economic Development Contributions, for the Recognition for Local Enterprises) shall be achieved. This approach shall also ensure fostering of rural development. It is expected that the small scale RE projects will have a deeper socio-economic impact extending beyond the large scale REIPPP projects. It is targeted at SMEs, the component of the South African industry which constitutes 91% of the formal business, contributing between 52 to 57% to GDP and account for

approximately 61% of employment. The removal of financial barriers to participation in the RE market through the GEF Equity Fund shall further enhance economic growth and creation of 'green jobs'.

### **1.7 Innovation, sustainability and potential for scaling up**

It is the first time in South Africa that an initiative like FIRST will be implemented. The proposed GEF Equity Fund will by default participate in the innovativeness of FIRST through the provision of equity finance to the small projects. Innovation in FIRST is observed in the following characteristics:

- (i) Providing debt funding at affordable cost to SMEs, due to the blending of the KfW First Loss facility with the DBSA's debt facility.
- (ii) Taking up sponsor risk mitigated by strong EPC and O&M contractors and a competent and highly experienced Facility Manager to ensure the success of the projects.
- (iii) Providing equity funding (through the proposed GEF funding) at reasonable lending rates to SMEs to ensure their sustainability as project developers and/or investors.
- (iv) Include a securitization platform for potential adoption in the market in rolling out infrastructure programmes in sectors where there are similar barriers and/or market failure. The securitisation platform is to catalyse the participation of the private sector in the small scale Renewable IPP sectors upon the projects being derisked at Commercial Operation Date.

The technical assistance (project preparation) component of first shall ensure the funding of bid-ready projects by the GEF proposed Equity Fund. Skills transfer and capabilities shall be enhanced, building competence of small project developers, ensuring sustainability and participation in large scale projects in the future. The fund aims to provide access to finance for small projects, but not necessarily cheap or subsidised finance as a model needs to be established that the private sector may replicate or build on at a later stage, and which is profitable enough to become sustainable in the near future. The interest rates offered are not below-market but have been pitched to be competitive. The FIRST and the Equity fund will securitise the de-risked projects so that the private sector can step in at a later stage. The loan book will be securitised after Commercial Operation Date and thereby assisting in creating a financial market for small, local RE IPPs. FIRST has been set up to be a self sustainable funding structure. The fund is to initially fund 100MWs but will however be used to fund additional allocated MWs in the future. FIRST has been set up to ensure that it is able to generate sufficient cash flows from the sub-loan investments to ensure that it is able to meet its operating expenses. Although FIRST has been set up as a non-profit organisation (i.e. dividends will not be declared to Sponsors), it is meant to retain some excess cash in order to be self-sustaining. It is the intention of the Sponsors of FIRST that similar such structures are adopted in the market in the future in order to resolve market barriers to the growth and roll out of infrastructure programmes. Through participation as the equity provider for projects that will benefit from FIRST, the GEF funded equity facility shall also contribute in the sustainability of the small scale RE projects and market. It is also envisaged that the equity fund initiated through GEF funding will be sustained through the participation of DBSA and other DFIs (e.g. Industrial Development Corporation). These financiers will provide equity funding to SMEs and small scale RE projects in the future. Both DBSA and IDC have in the past, financed equity requirements for community based organisations and Black Economic Empowerment developers which have participated in the large RE IPP programme and will continue to do so post the GEF capitalised equity fund

The small projects IPP Programme has been designed to be scaled up going forward. At present 200MWs have been allocated by the Minister of Energy for procurement from SMEs. There is however an intention from the Department of Energy to allocate additional MWs of energy to be procured from SMEs in the short term (i.e. an additional 200MWs). This will bring the total allocated MWs to 400MWs in the short term. Additional MWs are to be allocated depending on the outcomes of the Small IPP Programme and resolution of the barriers to entry in the sector faced by the SMEs.

## **2. Stakeholders**

The Department of Energy will be the main execution partner for the SP-IPPP (which will be funded by the DBSA FIRST and the proposed GEF Equity Fund) since it is the line ministry for energy related matters. The Department

of Environmental Affairs (DEA), as the custodian for all environmental conventions, including the UNFCCC, will work closely with all stakeholders in the project at the project design stage as well as implementation to ensure the achievement of the proposed outcomes. Information and lessons gathered from the implementation of this project will be used by the various stakeholders to report on progress on implementation of initiatives on transforming the country to a low carbon economy as well as meeting the international obligations such as formulation of National Communications and Biennial Update Reports. The objective of the GEF funded Equity Fund is to remove financial barriers to the participation of SMEs in the RE market, hence the Department of Trade and Industry (DTI) shall also be closely involved in the design of the project ensuring that the targeted players are reached and benefit accordingly. Other ministries will include the Department of Economic Development whose interest will be mainly ensuring that the economic benefits of the project are achieved. The industry players (SMEs) and their associations (e.g. Southern African PV Association, Southern African Wind Energy Association and Southern African Biogas Industry Association) shall be very closely engaged in the PPG stage of the project. These are the players targeted by the project. Prior to PPG stage, a steering committee including key players in the project shall be formulated with clearly defined TORs. Community based organisations shall be reached through advertisements in the local and national media to ensure that they benefit in accordance with the programme's legal requirements.

### 3. Gender Considerations

The SP-IPPP that will be funded by the Equity Fund is by its nature targeted to small scale RE industry players with specific bidding socio-economic development requirements (which will be assigned a defined score in the evaluation process) that obligates project developers to spend approximately 1.25% of revenue on Social Economic Development programmes that are local- community- based. Women are mainly targeted under the Social Economic Development programmes. Projects that will be funded through the FIRST and the capitalized GEF equity fund will ensure compliance with these requirements at the bidding stage and during the construction and implementation phases.

### 4. Risks

Risks	Rating	Mitigation
<b>Policy and Political</b> (Low government commitment to support the programme)	Low	The project objectives and outcomes are in line with national policies and priorities. The Programme has the full support of Government through the Department of Energy. It will also be implemented on the same policy provisions which are said to have contributed, to a large extent, to the success of the large scale IPPP.
<b>Sustainability</b> (Failure to achieve programme outcomes and objectives after successful delivery of outputs)	Medium	FIRST has been set up to be a self sustainable funding structure. The fund is to initially fund 100MWs but will however be used to fund additional allocated MWs in the future. The role played by the equity fund from GEF is will be important in establishing and testing this model and its sustainability for the future. FIRST has been set up to ensure that it is able to generate sufficient cash flows from the small projects sub-loan investments to ensure that it is able to meet its operating expenses.  The project securitization platform to be set up by FIRST is a first initiative of this nature in South Africa. The intention is to encourage the adoption of similar structures in the market when undertaking infrastructure programmes in sectors where there are similar barriers and/or market failure.
<b>Environmental</b> (Failure to mitigate environmental risks)	Low	All Small Projects shall conduct Environment Impact Assessments and acquire Environmental Authorisations from the Department of Environmental Affairs before funding is made available to them by

		FIRST and the Equity Fund.
<b>Completion</b> (The risk of projects not reaching Commercial Operation Date)	Low	The completion risk will be managed through the following mitigations: A pre-selected suite of EPC Contractors with the: <ul style="list-style-type: none"> <li>▪ financial strength to support required guarantees.</li> <li>▪ technical expertise to ensure construction standards and deadlines are met.</li> <li>▪ previous track record under the Renewable Energy IPP programme in terms of projects successfully completed.</li> </ul> Lenders Technical Advisor will sign off for plant design, solar resource, module performance, inverter compatibility, practical completion and provisional and final acceptance of the plant's level of performance and all milestone linked payments.
<b>Operational</b>	Low	A pre-selected suite of Operations and Maintenance ("O&M") contractors with the following expertise shall be appointed: <ul style="list-style-type: none"> <li>▪ The financial strength to support required guarantees;</li> <li>▪ Technical expertise to ensure operations and maintenance regimes are met;</li> <li>▪ Previous track record under the Renewable Energy IPP programme in terms of projects successfully being operated by the O&amp;M Contractor.</li> <li>▪ A robust O&amp;M guarantee regime comprised of Performance Liquidated Damages</li> </ul>
<b>Sponsor weakness</b>	Medium	The SPIPP is specifically targeted at weak sponsors to encourage capacity build-up and necessary experience to enable them to participate in the REIPP in due course. Sponsor selection will be managed via the Investment Policy and the Department of Energy's 1 <sup>st</sup> Stage Selection process, as per the RfP's requirements.  Sponsor risk is also mitigated by: <ul style="list-style-type: none"> <li>▪ Suite of capable and competent EPC and O&amp;M contractors available to the sponsors (as detailed above)</li> <li>▪ The Technical Assistance facility provided by KfW to finance the development of the projects.</li> <li>▪ The appointment of the Facility Manager.</li> </ul>
<b>Energy Resource</b> (The risk of lower actual energy yields compared against predicted energy yields)	Low	The solar and wind resources will be independently verified by the Lenders Technical Advisor(s) to confirm P90 and P50 energy yields. It is however known that South Africa is well endowed with Solar and Wind resources, hence the success of the large scale Renewable Energy Programme.
<b>Market/Off-Take</b>	Low	20 years Power Purchase Agreements ("PPA") with Eskom will be signed. The Department of Energy will guarantee Eskom's obligations under the PPA, in the event of Eskom's default.
<b>Seed/Equity Investment</b> (The risk of sponsors/SMEs ability to contribute the required equity)	Medium	The sponsors will put in a minimum of 10% equity into each project, which will effectively be the seed investment. This will be in the form of liquid bank instruments acceptable to the DBSA.  It is proposed that a GEF Equity Fund is set up in order to enable SMEs targeted for participation under the Programme, to be able to

		readily raise the equity funding. The GEF funding will be used to provide 50% of the total required equity investment.
<b>Fund Legal Structure</b> (The risk of enforceability and validity of the proposed FIRST structure)	Low	The legal structure for FIRST has been reviewed by an internationally renowned Legal Firm and have provided a positive legal opinion regarding the enforceability and validity of the proposed FIRST structure.
<b>Refinance Risk at Securitisation</b> (The risk of an unsuccessful securitisation process)	Medium	<p>It must be noted that the DBSA's Facility as currently structured is not dependent on a successful securitization process. An unsuccessful securitisation process will result in the FIRST debt facility being settled over the legal tenor of 15years from cash flows generated by the small IPP projects, based on the 20 years Power Purchase Agreement.</p> <p>The following aspects are however in favour of a successful securitization process:</p> <ul style="list-style-type: none"> <li>▪ Securitisation process is to be undertaken once the portfolio of Small Projects has been de-risked (i.e. Completion Risk mitigated).</li> <li>▪ There are robust project cash flows and Debt Service Cover ratios to service project loans at the FIRST level (i.e. through an optimal tariff structure).</li> </ul>

## 5. Coordination

The project will coordinate with several GEF-funded projects. For example, it will explore the funding of biogas projects (a pipeline of 25 projects proposed) which have been identified in the scaling up component of the GEF-funded Biogas Market Development PIF (GEF ID 5704) which is currently in its project development stage. Experiences of small scale RE project financed through this DBSA facility and the GEF capitalised Fund will also contribute towards the formulation of the Biogas Strategy and Regulatory Reform which are identified as an outcome of the Biogas GEF approved PIF. In addition, the RE technology that will be financed by the project have been demonstrated and tested, some of it having benefited in the country's large scale REIPPP including the GEF funded South Africa Wind Energy Programme (SAWEP). This project will further coordinate, with the objective of taking lessons and scaling up, with several projects which have been funded under the the large scall REIPPP. It is expected that during the PPG stage of this project, consultations with providers of additional equity and other institutions with potential and future leverage resources (which may have pipeline bankable projects ready) such as the Industrial Development Collaboration will be undertaken. The SMEs, the key targets in this project, with their affiliate associations/organisations (including community based organisations) shall be made aware of the availability of the GEF funded Equity Fund through national media as well as future determinations that will be made by the Ministry of Energy. Collaboration with projects which may have a symbiotic relation to the small scale RE initiatives that will be funded by the GEF fund, currently in planning stage or under implementation by these groups, shall be encouraged. Further collaboration with other initiatives will be identified and done through the different stakeholder forums including the Intergovernmental Committee on Climate Change (IGCCC).

## 6. Consistency with National Priorities

The establishment of the GEF capitalized equity fund is meant to catalyse the small scale RE markets and in line with South Africa's commitment to transition to a low carbon economy that is guided by its vision for 2030, as detailed in the 2011 National Development Plan and the National Climate Change Response White Paper. The National Development Plan (Ch. 5) further declares growth in the renewable energy sector by 2030, taking off in response to falling technology costs and government's bold support for the sector, and the introduction of targeted carbon- pricing mechanisms to facilitate further private investment in renewable energy. The proposed project also

aligns to strategies and initiatives that are being implemented in line with the country's efforts to reduce GHG emissions in accordance with its commitments and contribution to worldwide efforts under the UNFCCC. In its Biennial Update Report (BUR) submitted in November 2014, South Africa reiterates that its energy intense economy has resulted in an emissions profile that differs substantially from that of other developing countries at a similar stage of development. The REIPPP programme, whose component, the SP-IPPP will be funded by the proposed GEF Equity Fund, is reported in the BUR as an additional effort to the country's suite of "Working for Climate" and "Flagship" programmes currently proposed and under implementation. South Africa further undertook in its BUR, to reduce its GHG emissions by 34% below Business as Usual (BAU) before 2020 and by 42% BAU by 2025. It is emphasized in the report that the extent to which this can be achieved is dependent on the provision of financial resources and the transfer of technology and capacity building support. Hence, the establishment of the DBSA FIRST and the proposed GEF funded Equity Fund is an essential element in the achievement of the country's commitments towards meeting these targets. The proposed project will result in the production of 100 MW resulting in substitution of energy that could have been produced from coal, thus reducing 263,208 tCO<sub>2</sub> per year emissions. Installation of 100MW power that will be produced over the 20year lifecycle of the proposed small projects will also contribute significantly to the future energy mix of 42% (17.8 GW) of the country that is targeted through the policy adjusted Integrated Resource Plan.

## **7. Knowledge Management**

Since 2009, South Africa has developed, implemented and continuously improves its M&E system including the National Climate Change Response database (NCCRDB), a web-based system containing information on the mitigation, adaptation and research projects that have been implemented in the country. Lessons and information gathered from projects implemented through financial, technical and institutional support from FIRST and the GEF funded Small Projects Equity Fund shall be used to inform the country's M&E system, ensuring improved replicability.

The funding approach that is used in FIRST is the first in the RE market in South Africa. Experiences and data from gathered from funding and implementation of the 20 small projects shall be documented and used to inform and improve future initiatives on building financing models for projects in this market in South Africa.

## **8. Monitoring and Evaluation**

The Special Purpose Vehicle Facility Manager will provide reports on the activities of FIRST, particularly on the GEF financed Equity Fund. Reports shall include information on progress on the implementation of activities funded by the two funds, the outcomes, outputs and indicators. The Facility Manager, shall as part of establishing the baseline information for evaluating project outcomes, provide information on the small scale renewable energy market conditions for investment that will allow evaluation of how the provision of equity finance through the GEF equity fund would remove financial barriers. Information will be updated in accordance with GEF M&E requirements (e.g. midterm reviews). Lessons and information gathered from projects implemented through financial, technical and institutional support from FIRST and the GEF funded Small Projects Equity Fund shall inform the country's M&E system, ensuring improved replicability.

The proposed duration of the project is 48 months, assuming the GEF CEO's endorsement to be achieved by December 2015. Monitoring and evaluation on the project shall be carried out in line with GEF policies; the midterm review is proposed for February 2018 whilst terminal evaluation will commence at least a month after project completion i.e. between January and February 2020. It may be noted that the DBSA intends to commence the implementation of this project as soon as possible, therefore timelines may be revised. Details on the project timeframes and expected reporting shall be confirmed at the project preparation phase.

## **9. Comparative Advantage of the Agency**

The proposed programme (establishment of FIRST and the GEF funded Equity Fund) is within DBSA's mandate to support programmes that result in infrastructure development, regional development, industrialisation and job creation. In addition, energy generation and in particular renewable energy is an important sector fostering and

sustaining the growth and competitiveness of the South African economy and the programme will contribute towards ensuring the security of supply of energy and thus economic growth. The DBSA has, in line with its comparative advantage and government mandate fit, participated in financing the large scale REIPPP programme and properly fit for participation in the small scale market, ensuring catalysation and growth of the industry.

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

**A. RECORD OF ENDORSEMENT<sup>7</sup> 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 [SGP OFP endorsement letter](#)).

NAME	POSITION	MINISTRY	DATE (MM/dd/yyyy)

**B. GEF AGENCY(IES) CERTIFICATION**

**This request has been prepared in accordance with GEF policies<sup>8</sup> and procedures and meets the GEF criteria for project identification and preparation under GEF-6.**

Agency Coordinator, Agency name	Signature	Date (MM/dd/yyyy)	Project Contact Person	Telephone	Email
Nomsa T. Zondi Development Bank of Southern Africa		12/03/2015  Revision date 27/03/2015	Nomsa T. Zondi	+27113133491	nomsaz@dbsa.org

<sup>7</sup> For regional and/or global projects in which participating countries are identified, OFP endorsement letters from these countries are required even though there may not be a STAR allocation associated with the project.

<sup>8</sup> GEF policies encompass all managed trust funds, namely: GEFTF, LDCF, and SCCF

Since the investments that will be made under the Program have not been identified yet, we provide here an illustrative schedule of reflows for a portfolio of Wind and Photovoltaic (“PV”) 1-5MW renewable energy projects to be funded by FIRST. A summary of the indicative debt and equity investments and expected reflows is provided in Annex A below.

## ANNEX A. Illustrative Schedule of Reflows (Year 1-10)

Projected Cash Flows from Portfolio of Small Renewable Energy Projects (1-5MWs)													
Dates	Semi-annual Period (PPA Term=20 years)	Electricity Revenue (Wind & PV projects)	Operating Expenses & taxation (Wind & PV Projects)	Capital Expenditure	Free Cash Flows	Cash Available For Debt Service ("CAFDS")	Total Senior Debt Service (Capital & Service)	Total senior debt repayments	Cash Available for Equity Distribution	Net cash flow to equity investors	Debt Service Cover Ratios ("DSCR")	Equity IRR (Project)	Cash Available for Equity Distribution
		US\$ '000	US\$ '000	US\$ '000	US\$ '000	US\$ '000	US\$ '000	US\$ '000	US\$ '000	US\$ '000			US\$ '000
<b>Total</b>		<b>904,186</b>	<b>(58,609)</b>	<b>294,103</b>	<b>728,239</b>	<b>728,239</b>	<b>(752,468)</b>	<b>(398,654)</b>	<b>320,215</b>	<b>291,070</b>		<b>13.8%</b>	<b>320,215</b>
31-Dec-16	-	-	-	373,590	-	-	(344,444)	-	-	(29,145)			
30-Jun-17	1	11,038	-	-	9,370	9,370	(7,641)	-	1,729	1,729	1.23		1,729
31-Dec-17	2	16,756	(2,848)	-	14,711	14,711	(12,413)	-	2,298	2,298	1.19		2,298
30-Jun-18	3	16,803	(2,856)	-	17,097	17,097	(12,626)	(12,626)	4,471	4,471	1.35		4,471
31-Dec-18	4	17,394	(2,957)	-	17,098	17,098	(12,637)	(12,637)	4,461	4,461	1.35		4,461
30-Jun-19	5	17,437	(2,964)	-	16,996	16,996	(12,838)	(12,838)	4,158	4,158	1.32		4,158
31-Dec-19	6	18,045	(3,068)	-	17,111	17,111	(12,884)	(12,884)	4,227	4,227	1.33		4,227
30-Jun-20	7	18,083	(3,074)	-	17,075	17,075	(13,086)	(13,086)	3,989	3,989	1.30		3,989
31-Dec-20	8	18,707	(3,180)	-	17,228	17,228	(13,125)	(13,125)	4,103	4,103	1.31		4,103
30-Jun-21	9	18,841	(3,203)	-	17,391	17,391	(13,348)	(13,348)	4,043	4,043	1.30		4,043
31-Dec-21	10	19,379	(3,294)	-	17,463	17,463	(13,340)	(13,340)	4,123	4,123	1.31		4,123
30-Jun-22	11	19,406	(3,299)	-	17,550	17,550	(13,563)	(13,563)	3,987	3,987	1.29		3,987
31-Dec-22	12	20,060	(3,410)	-	17,790	17,790	(13,579)	(13,579)	4,210	4,210	1.31		4,210
30-Jun-23	13	20,079	(3,413)	-	17,902	17,902	(13,792)	(13,792)	4,110	4,110	1.30		4,110
31-Dec-23	14	20,748	(3,527)	-	18,165	18,165	(13,796)	(13,796)	4,369	4,369	1.32		4,369
30-Jun-24	15	20,759	(3,529)	-	18,311	18,311	(14,010)	(14,010)	4,301	4,301	1.31		4,301
31-Dec-24	16	21,440	(3,645)	-	18,574	18,574	(13,998)	(13,998)	4,576	4,576	1.33		4,576
30-Jun-25	17	21,557	(3,665)	-	18,894	18,894	(14,228)	(14,228)	4,666	4,666	1.33		4,666
31-Dec-25	18	22,135	(3,763)	-	18,949	18,949	(14,165)	(14,165)	4,784	4,784	1.34		4,784
30-Jun-26	19	22,125	(3,761)	-	18,779	18,779	(14,391)	(14,391)	4,388	4,388	1.30		4,388
31-Dec-26	20	22,830	(3,881)	-	19,156	19,156	(14,343)	(14,343)	4,814	4,814	1.34		4,814

**ANNEX A. Illustrative Schedule of Reflows (Year 11-20)**

Projected Cash Flows from Portfolio of Small Renewable Energy Projects (1-5MWs)													
Dates	Semi-annual Period (PPA Term=20 years)	Electricity Revenue (Wind & PV projects)	Operating Expenses & taxation (Wind & PV Projects)	Capital Expenditure	Free Cash Flows	Cash Available For Debt Service ("CAFDS")	Total Senior Debt Service (Capital &	Total senior debt repayments	Cash Available for Equity Distribution	Net cash flow to equity investors	Debt Service Cover Ratios ("DSCR")	Equity IRR (Project)	Cash Available for Equity Distribution
		US\$ '000	US\$ '000	US\$ '000	US\$ '000	US\$ '000	US\$ '000	US\$ '000	US\$ '000	US\$ '000	US\$ '000		US\$ '000
<b>Total</b>		<b>904,186</b>	<b>(58,609)</b>	<b>294,103</b>	<b>728,239</b>	<b>728,239</b>	<b>(752,468)</b>	<b>(398,654)</b>	<b>320,215</b>	<b>291,070</b>		<b>13.8%</b>	<b>320,215</b>
30-Jun-27	21	22,808	(3,877)	-	19,493	19,493	(14,562)	(14,562)	4,931	4,931	1.34		4,931
31-Dec-27	22	23,521	(3,999)	-	19,667	19,667	(14,492)	(14,492)	5,175	5,175	1.36		5,175
30-Jun-28	23	23,485	(3,992)	-	19,912	19,912	(14,875)	(14,875)	5,037	5,037	1.34		5,037
31-Dec-28	24	24,206	(4,115)	-	20,190	20,190	(14,851)	(14,851)	5,339	5,339	1.36		5,339
30-Jun-29	25	24,284	(4,128)	-	21,172	21,172	(15,292)	(15,292)	5,881	5,881	1.38		5,881
31-Dec-29	26	24,880	(4,230)	-	22,202	22,202	(15,057)	(15,057)	7,145	7,145	1.47		7,145
30-Jun-30	27	24,811	(4,218)	-	21,113	21,113	(14,167)	(14,167)	6,946	6,946	1.49		6,946
31-Dec-30	28	25,540	(4,342)	-	21,993	21,993	(14,270)	(14,270)	7,724	7,724	1.54		7,724
30-Jun-31	29	25,451	(4,327)	-	16,148	16,148	(13,268)	(13,268)	2,880	2,880	1.22		2,880
31-Dec-31	30	26,179	(4,451)	-	18,942	18,942	(13,388)	(13,388)	5,554	5,554	1.41		5,554
30-Jun-32	31	26,069	(4,432)	-	26,869	26,869	-	(10,685)	26,869	26,869			26,869
31-Dec-32	32	26,794	(4,555)	-	13,900	13,900	-	-	13,900	13,900			13,900
30-Jun-33	33	26,802	(4,556)	-	22,365	22,365	-	-	22,365	22,365			22,365
31-Dec-33	34	27,378	(4,654)	-	16,603	16,603	-	-	16,603	16,603			16,603
30-Jun-34	35	27,215	(4,627)	-	16,506	16,506	-	-	16,506	16,506			16,506
31-Dec-34	36	27,923	(4,747)	-	16,929	16,929	-	-	16,929	16,929			16,929
30-Jun-35	37	27,730	(4,714)	-	16,813	16,813	-	-	16,813	16,813			16,813
31-Dec-35	38	28,423	(4,832)	-	17,228	17,228	-	-	17,228	17,228			17,228
30-Jun-36	39	28,196	(4,793)	-	17,092	17,092	-	-	17,092	17,092			17,092
31-Dec-36	40	28,869	(4,908)	-	17,494	17,494	-	-	17,494	17,494			17,494

## ANNEX B. Illustrative Baseline Scenario Assuming Small Project Developers/SMEs Equity is Funded by Commercial Equity Funders

The table below provides the Baseline Scenario assuming there is no GEF Equity Fund and SMEs are funded by the commercial equity funders. The impact on SME equity returns are indicated:

		Baseline Scenario assuming SME equity is funded by commercial equity investors									
		Commercial Equity Funders Returns					Small Project Developers/SME Equity Returns				
Dates	Cash Available for Equity Distribution	Net Cash flows distributed to Commercial Funders	Equity Funding provided to SMEs	Net cash flow to equity investors	Equity Returns (IRR)	Payback Period (years)	Net Cash flows distributed to SMEs	SMEs Own Equity Contribution	Net cash flow to equity investors	SMEs Equity Returns (IRR)	Payback Period (years)
		US\$ '000	US\$ '000	US\$ '000			US\$ '000	US\$ '000	US\$ '000		
<b>Total</b>	<b>320,215</b>				<b>14.9%</b>	<b>20</b>				<b>12.3%</b>	<b>20</b>
31-Dec-16			(16,030)	(16,030)				(13,115)	(13,115)		
30-Jun-17	1,729	1,054		1,054			674		674		
31-Dec-17	2,298	1,402		1,402			896		896		
30-Jun-18	4,471	2,727		2,727			1,744		1,744		
31-Dec-18	4,461	2,721		2,721			1,740		1,740		
30-Jun-19	4,158	2,537		2,537			1,622		1,622		
31-Dec-19	4,227	2,578		2,578			1,648		1,648		
30-Jun-20	3,989	2,433		2,433			1,556		1,556		
31-Dec-20	4,103	2,503		2,503			1,600		1,600		
30-Jun-21	4,043	2,466		2,466			1,577		1,577		
31-Dec-21	4,123	2,515		2,515			1,608		1,608		
30-Jun-22	3,987	2,432		2,432			1,555		1,555		
31-Dec-22	4,210	2,568		2,568			1,642		1,642		
30-Jun-23	4,110	2,507		2,507			1,603		1,603		
31-Dec-23	4,369	2,665		2,665			1,704		1,704		
30-Jun-24	4,301	2,624		2,624			1,677		1,677		
31-Dec-24	4,576	2,791		2,791			1,785		1,785		
30-Jun-25	4,666	2,846		2,846			1,820		1,820		
31-Dec-25	4,784	2,918		2,918			1,866		1,866		
30-Jun-26	4,388	2,677		2,677			1,711		1,711		
31-Dec-	4,814	2,936		2,936			1,877		1,877		

## ANNEX C. Illustrative Alternative Scenario Assuming Small Projects Developers/SMEs Equity is Funded by the GEF Equity Fund

The table below provides the Alternative Scenario assuming the proposed GEF Equity Fund provides funding to small projects developers/SMEs.

Alternative Scenario assuming SME equity is funded by the GEF Equity Fund										
Dates	Cash Available for Equity Distribution	GEF Trust Fund Equity Returns				Small Project Developers/SME Equity Returns				
		Net Cash flows distributed to GEF Trust Fund	GEF Trust Fund Equity Investment	Net cash flow to equity investors	GEF Equity Return (IRR)	Payback Period (years)	Net Cash flows distributed to SMEs	SMEs Own Equity Contribution	Net cash flow to equity investors	SMEs Equity Returns (IRR)
	US\$ '000	US\$ '000	US\$ '000	US\$ '000			US\$ '000	US\$ '000	US\$ '000	
<b>Total</b>	320,215				6.0%	5				16.5% 20
31-Dec-16	-		(14,573)	(14,573)			(14,573)	(14,573)		
30-Jun-17	1,729	864		864			864		864	
31-Dec-17	2,298	1,149		1,149			1,149		1,149	
30-Jun-18	4,471	2,235		2,235			2,235		2,235	
31-Dec-18	4,461	2,230		2,230			2,230		2,230	
30-Jun-19	4,158	2,079		2,079			2,079		2,079	
31-Dec-19	4,227	2,113		2,113			2,113		2,113	
30-Jun-20	3,989	1,995		1,995			1,995		1,995	
31-Dec-20	4,103	2,052		2,052			2,052		2,052	
30-Jun-21	4,043	2,021		2,021			2,021		2,021	
31-Dec-21	4,123	2,061		2,061			2,061		2,061	
30-Jun-22	3,987	1,994		1,994			1,994		1,994	
31-Dec-22	4,210			-			4,210		4,210	
30-Jun-23	4,110			-			4,110		4,110	
31-Dec-23	4,369			-			4,369		4,369	
30-Jun-24	4,301			-			4,301		4,301	
31-Dec-24	4,576			-			4,576		4,576	
30-Jun-25	4,666			-			4,666		4,666	
31-Dec-25	4,784			-			4,784		4,784	
30-Jun-26	4,388			-			4,388		4,388	