



Leapfrogging South Africa's Markets to High Efficiency LED Lighting and High Efficiency Distribution Transformers

Part I: Project Information

Name of Parent Program

Leapfrogging Markets to High Efficiency Products (Appliances, including Lighting, and Electrical Equipment) (PROGRAM)

GEF ID

9492

Project Type

FSP

Type of Trust Fund

GET

Project Title

Leapfrogging South Africa's Markets to High Efficiency LED Lighting and High Efficiency Distribution Transformers

Countries

South Africa

Agency(ies)

UNDP, DBSA

Other Executing Partner(s):

Department of Energy (DOE)

Executing Partner Type

Government

GEF Focal Area

Climate Change

Taxonomy

Focal Areas, Gender Equality, Sustainable Development Goals, Climate Change, Climate Change Mitigation, Financing, Energy Efficiency, Influencing models, Deploy innovative financial instruments, Strengthen institutional capacity and decision-making, Transform policy and regulatory environments, Stakeholders, Type of Engagement, Consultation, Information Dissemination, Communications, Awareness Raising, Public Campaigns, Education, Civil Society, Community Based Organization, Non-Governmental Organization, Private Sector, Large corporations, Financial intermediaries and market facilitators, Individuals/Entrepreneurs, Gender results areas, Gender Mainstreaming, Women groups, Capacity, Knowledge and Research, Capacity Development, Learning, Theory of change

Rio Markers**Climate Change Mitigation**

Climate Change Mitigation 1

Climate Change Adaptation

Climate Change Adaptation 0

Duration

48In Months

Agency Fee(\$)

900,000

A. Focal Area Strategy Framework and Program

Objectives/Programs	Focal Area Outcomes	Trust Fund	GEF Amount(\$)	Co-Fin Amount(\$)
CCM-1_P1	Promote timely development, demonstration and financing of low carbon technologies and mitigation options	GET	10,000,000	79,530,000
		Total Project Cost(\$)		10,000,000 79,530,000

B. Project description summary

Project Objective

Accelerating South Africa's efforts to transition the economy to energy-efficient products, by a) developing South Africa's market for LEDs on the electricity demand-side, and b) developing South Africa's market for high-efficiency distribution transformers on the electricity supply-side, resulting in climate change mitigation, stable power supply and therefore economic development and improved energy access.

Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing(\$)	Confirmed Co-Financing(\$)
I. Development of national strategy and regulatory mechanisms	Technical Assistance	1. Strengthened government capacity and regulatory frameworks for LEDs and distribution transformers	1.1 National coordination, assessment and strategy realized 1.2 S&L and MVE system developed for LED lighting and distribution transformers 1.3 Strengthened capacity of testing labs and testing of products	GET	1,718,932	2,070,000

Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing(\$)	Confirmed Co-Financing(\$)
II. Support mechanisms to accelerate market penetration of LEDs and HE distribution transformers	Technical Assistance	2. Awareness, knowledge and capacity enhanced of end-users, municipalities and private sector	2.1 Communication and promotional campaign designed and implemented 2.2 Capacity strengthened of municipalities to formulate EE programmes 2.3 Increased capacity for local production of LED products and distribution transformers 2.4. Monitoring and Evaluation (excl. audits)	GET	2,107,450	1,905,000
II. Support mechanisms to accelerate market penetration of LEDs and HE distribution transformers	Technical Assistance	3. Financial support programmes designed and operational	3.1 EEFI set up and providing financing to municipalities, municipally- owned entities, ESKOM or ESCOs 3.2 Financial advice services provided to prospective applicants	GET	1,000,000	15,000,000

Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing(\$)	Confirmed Co-Financing(\$)
II. Support mechanisms to accelerate market penetration of LEDs and HE distribution transformers	Investment	3. Financial support programmes designed and operational	3.1 EEFI set up and providing financing to municipalities, municipally- owned entities, ESKOM or ESCOs	GET	4,000,000	57,000,000
III. Sensitizing city dwellers and capacity strengthening for low-carbon urban initiatives	Technical Assistance	4. Environmentally sound management and waste disposal practices	4.1 Strengthened local knowledge on how to collect, recycle and responsibly dispose of lamps 4.2 Assessed issues and options of using vegetable oil in liquid-filled transformers	GET	719,074	1,170,000
Sub Total (\$)					9,545,456	77,145,000
Project Management Cost (PMC)						
				GET	454,544	2,385,000
Sub Total(\$)					454,544	2,385,000

Project Management Cost (PMC)

Total Project Cost(\$)	10,000,000	79,530,000
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C. Sources of Co-financing for the Project by name and by type

Sources of Co-financing	Name of Co-financier	Type of Co-financing	Amount(\$)
Government	Department of Energy	Grant	41,000,000
Government	Department of Energy	In-kind	1,650,000
Others	Eskom	In-kind	19,000,000
GEF Agency	UNDP	In-kind	600,000
GEF Agency	DBSA	Loans	16,000,000
GEF Agency	DBSA	In-kind	1,100,000
GEF Agency	UNEP	In-kind	30,000
Others	GELC	In-kind	150,000
Total Co-Financing(\$)			79,530,000

D. Trust Fund Resources Requested by Agency(ies), Country(ies), Focal Area and the Programming of Funds

Agency	Trust Fund	Country	Focal Area	Programming of Funds	NGI	Amount(\$)	Fee(\$)
UNDP	GET	South Africa	Climate Change		No	5,000,000	450,000
DBSA	GET	South Africa	Climate Change		No	5,000,000	450,000
Total Grant Resources(\$)						10,000,000	900,000

E. Non Grant Instrument

NON-GRANT INSTRUMENT at CEO Endorsement

Includes Non grant instruments? **No**

Includes reflow to GEF? **No**

F. Project Preparation Grant (PPG)

PPG Required

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PPG Amount (\$)

200,000

PPG Agency Fee (\$)

18,000

Agency	Trust Fund	Country	Focal Area	Programming of Funds	NGI	Amount(\$)	Fee(\$)
UNDP	GET	South Africa	Climate Change		No	200,000	18,000
Total Project Costs(\$)						200,000	18,000

Core Indicators

Indicator 6 Greenhouse Gas Emissions Mitigated

Total Target Benefit	(At PIF)	(At CEO Endorsement)	(Achieved at MTR)	(Achieved at TE)
Expected metric tons of CO ₂ e (direct)	0	15230000	0	0
Expected metric tons of CO ₂ e (indirect)	0	35180000	0	0

Indicator 6.1 Carbon Sequestered or Emissions Avoided in the AFOLU (Agriculture, Forestry and Other Land Use) sector

Total Target Benefit	(At PIF)	(At CEO Endorsement)	(Achieved at MTR)	(Achieved at TE)
Expected metric tons of CO ₂ e (direct)				
Expected metric tons of CO ₂ e (indirect)				
Anticipated start year of accounting				
Duration of accounting				

Indicator 6.2 Emissions Avoided Outside AFOLU (Agriculture, Forestry and Other Land Use) Sector

Total Target Benefit	(At PIF)	(At CEO Endorsement)	(Achieved at MTR)	(Achieved at TE)
Expected metric tons of CO ₂ e (direct)		15,230,000		
Expected metric tons of CO ₂ e (indirect)		35,180,000		
Anticipated start year of accounting		2023		
Duration of accounting		7		

Indicator 6.3 Energy Saved (Use this sub-indicator in addition to the sub-indicator 6.2 if applicable)

Total Target Benefit	Energy (MJ) (At PIF)	Energy (MJ) (At CEO Endorsement)	Energy (MJ) (Achieved at MTR)	Energy (MJ) (Achieved at TE)
Target Energy Saved (MJ)				

Indicator 6.4 Increase in Installed Renewable Energy Capacity per Technology (Use this sub-indicator in addition to the sub-indicator 6.2 if applicable)

Technology	Capacity (MW) (Expected at PIF)	Capacity (MW) (Expected at CEO Endorsement)	Capacity (MW) (Achieved at MTR)	Capacity (MW) (Achieved at TE)
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Indicator 11 Number of direct beneficiaries disaggregated by gender as co-benefit of GEF investment

	Number (Expected at PIF)	Number (Expected at CEO Endorsement)	Number (Achieved at MTR)	Number (Achieved at TE)
Female		3,800,000		
Male		3,800,000		
Total	0	7600000	0	0

PART II: Project JUSTIFICATION

1. Project Description

A.1. Project Description.

1. Global environmental problems, root causes, and barriers that need to be addressed: There is no change in alignment with the original Child Project Concept Note regarding the environmental problem, development challenge and causes and barriers. The statement of the problem and the project's theory of change have been elaborated and made much more specific, with direct linkages of causes (barriers and challenges) to proposed outcomes, outputs and activities. For additional details refer to the UNDP ProDoc (Section 2.2) and DBSA project document (Part 2, 2.1)

2. Baseline scenario or any associated baseline projects: There is no real change in alignment with the Child Project Concept Note, however, the baseline conditions and associated projects have been elaborated, with their nature and relevance described in more detail. The documentation (UNDP ProDoc, Section 3; DBSA ProDoc, Part 1, 1.3 and Part 2, 2.1) identifies how baseline activities address these causes, however leaving gaps that the GEF intervention is asked to address.

3. Proposed alternative scenario, GEF focal area strategies, outcomes and components

See UNDP ProDoc, Section 4.1 or DBSA ProDoc, Part 2, 2.2

This project still fits squarely within the GEF climate change mitigation focal area strategy, seeking to achieve GHG emissions reductions through well-proven technological opportunities (LED and high-efficiency distribution transformers) via supportive policies and strategies. There is no change in alignment with the whole of components and outcomes as such, encompassing strategy and regulatory framework, capacity strengthening and financial instruments. However, the description of individual outcomes and outputs has changed. The main change is that the first three outcomes of the ‘child project concept note’ are merged into one, while the fourth outcome of the ‘child concept’ is split into two. This reflects the logical linkage between outcomes and outputs and the relative importance in terms of activities proposed and GEF budget allocated.

This is explained in more detail in the following correspondence table of **components** and outcomes at ‘child concept’ stage with **component/outcomes** and outputs at CEO ER stage.

ProDoc / CEO ER	PIF (Child project concept)	Rationale for Change in PIF Outputs/Activities in Prodoc
Outcomes (1,2,...)	Components (1,2...)	
Outputs (1.1, 1.2, 2.1,..)	Outcomes (1.1, 2.1, ...)	

ProDoc / CEO ER Outcomes (1,2,...) Outputs (1.1, 1.2, 2.1,..)	PIF (Child project concept) Components (1,2...) Outputs (1.1, 2.1, ...)	Rationale for Change in PIF Outputs/Activities in Prodoc
1. Strengthened government capacity and regulatory frameworks for LEDs and distribution transformers		The new outcome concerns the whole of the regulatory framework, including strategy formulation, mandatory MEPS and labelling, and the MVE system (monitoring). Since these are related and involve the same set of government actors the Outcomes 1 and 3 of the ‘child concept’ are merged,
1.1 National coordination, assessment and strategy realised	1. Development of a national strategy to advance energy efficiency in lighting with LED and distribution transformers 1.1 Consensus is achieved by policy-makers and stakeholders on the goals, work plan and key tasks in a) developing the market for LEDs in SA in all sectors (residential, commercial, industrial, public), b) developing the market for high-efficiency distribution transformers	Output 1.1. of the CEO ER doc corresponds with Outcome 1.1 of the ‘child concept’. A strategy with an action plan will be realized in stakeholder-inclusive approach, based on discussion and achieving consensus in multi-stakeholder Working groups as well as building consensus at a regional level (SAPP, SADC, Comesa).
1.2 S&L and MVE system developed for LED lighting and distribution transformers 1.3 Strengthened capacity of testing labs and testing of products	2. Development of regulatory mechanisms, including minimum energy performance standards (MEPS) for LEDs and distribution transformers 2.1 Legal frameworks have been agreed and, on that basis, MEPS have been put in place based on global best practice for a) LEDs, b) distribution transformers	One important policy instrument to achieve the goals of the before-mentioned strategies on LED and HE transformers will be the formulation of a regulatory-institutional framework, which will include: - Mandatory MEPS (for LED/lighting and distribution transformers) and labelling (for LED/lighting) - A well-functioning system of monitoring, control, verification and

ProDoc / CEO ER Outcomes (1,2,...) Outputs (1.1, 1.2, 2.1,...)	PIF (Child project concept) Components (1,2...) Outcomes (1.1, 2.1, ...)	Rationale for Change in PIF Outputs/Activities in Prodoc
	3. Creation of monitoring, verification, and enforcement (MVE) for LEDs and distribution transformers 3.1 MVE capacities have been established to ensure compliance with MEPS for a) LEDs, b) distribution transformers 4.2 Specifications for public procurement and utilities have been adopted for a) LEDs, b) distribution transformers	enforcement (MVE), including testing facilities - Specification for public procurement and (based on lowest lifetime cost rather than lowest investment cost) and These elements figure in both the CEO ER (Outputs 1.2 and 1.3) and the ‘child concept’ (Outcomes 3 and 4), including the context of regional collaboration and the need for capacity strengthening (of the MVE institutions, including testing labs). However, to clarify outputs/outcomes there is re-wording of text. An addition, regarding procurement, is the need to look at appropriate regulations for municipalities to work with third parties (energy service companies and debt financing)
2. Awareness, knowledge and capacity enhanced of end-users, municipalities and private sector	4. Development of supporting policies to accelerate the market development for LEDs, and the turnover of the distribution transformer stock	The wording of Outcome 4 in the ‘child concept’ may be misleading. Communication campaigns, financial support and distribution campaign are examples of policy <i>instruments</i> rather than <i>policies</i> .
2.1 Communication and promotional campaign designed and implemented 2.3 Increased capacity for local production of LED products and distribution transformers	4.1 Private end-users and companies become aware of the benefits of LEDs 4.5 Increased capacities of manufacturers to produce LEDs locally	The ‘child concept’ focusses on private sector end-users, households and companies as project beneficiaries (see its Outcome 4.1 and 4.5). These are still there in the CEO ER doc and their awareness raising and capacity enhancement needs are addressed in the Outputs 2.1 and 2.3. In addition, the Project will have a major focus on ‘municipalities’ as important actors in South Africa regarding LED (in street lighting and public buildings) and distribution transformers (municipal utilities). Therefore, capacity strengthening and advisory services to municipalities is mentioned in the CEO ER doc as a separate output (2.2)
2.2 Capacity strengthened of municipalities to formulate EE programmes	--	

ProDoc / CEO ER Outcomes (1,2,...) Outputs (1.1, 1.2, 2.1,..)	PIF (Child project concept) Components (1,2...) Outcomes (1.1, 2.1, ...)	Rationale for Change in PIF Outputs/Activities in Prodoc
3. Financial support programmes designed and operational 3.1 EEFI set up and providing financing to municipalities, municipally- owned entities, ESKOM or ESCOs 3.2 Financial advice services provided to prospective applicants	4.3 With financing schemes, end-users overcome the higher initial purchase price of LEDs 4.4 Loans are available to utilities at low-interest rates to purchase high-efficiency distribution transformers	<p>A financial instrument, given the acronym EEFI, is proposed to be set up, mainly aiming at providing support initiatives from municipalities/utilities (where appropriate in ESCO modalities). This will be a partial grant mechanism, as explained in the UNDP/DBSA ProDocs.</p> <p>In general, there may be less need for LED end-user support given LED price development (Outcome 4.3 in the ‘child concept’) rather awareness raising is crucial (see Output 2.1 in CER ER). However, particular groups in the residential sector may benefit from mass procurement of LED lamps (as explained in the UNDP/DBSA project documents</p>
4. Environmentally sound management and waste disposal practices 4.1 Strengthened local knowledge on how to collect, recycle and responsibly dispose of lamps 4.2 Assessed issues and options of using vegetable oil in liquid-filled transformers	5. Enhanced environmentally sound management for inefficient lamps and distribution transformers 5.1 Capacities are in place for a national system to collect, recycle and responsibly dispose of used lamps and distribution transformers that contain valuable and hazardous materials	<p>The outcome/outputs are basically the same in child concept and CEO ER doc but have been re-worded to clarify the outcome/output statements.</p> <p>It should be noted that the issue of PCBs in oil of liquid-filled transformers is not dealt with directly in the Project since this is subject of GEF-supported DBSA-implemented project on PCBs in oils.</p>

4. Incremental cost reasoning has been further elaborated in the UNDP Project Document:

- Cost efficiency and effectiveness (UNDP ProDoc, Section 5.1; or DBSA, Part 2.3)
- Incremental reasoning (UNDP ProDoc, Section 2.1; or DBSA, Section 3)
- Detailed line-by-line budget notes and breakdown of planned spending of GEF funds and co-financing in Financial Planning and Management (UNDP, Section 9) and Total Budget and Work Plan (UNDP Section 10; or DBSA, Section 4)
- Annex F (in both ProDocs), Calculations of targeted energy savings and GHG emission reduction

5. Global environmental benefits: The Child Project Concept Note makes general statements on the projected *annual* GHG reduction (17 million tCO₂) and energy savings (19 TWh) in 2030, but does neither give the methodology how these figures were derived nor does it give cumulative estimates (over 2017-2030). The Project Document elaborates on the global environmental benefits, including targets for global environmental benefits summarized in the Project Results Framework (Annex A) and GEF Core Indicators (see Annex E in this CEO ER doc). For calculation details of annual and cumulative greenhouse gas emission reduction, the reader is referred to Annex F in the UNDP and DBSA Project Documents.

6. Sustainability, and potential for scaling up. Elaboration of innovativeness, sustainability, and potential for scaling up has been provided in the Project Document (see DBSA ProDoc, Section 2.5, or the UNDP ProDoc, Section, Section 4.7).

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

A.2. Child Project?

If this is a child project under a program, describe how the components contribute to the overall program impact.

This project is a Child Project under the GEF-funded UN Environment-led global project *Leapfrogging Markets to High Efficiency Products (Appliances, Including Lighting, and Electrical Equipment)*. All components of the project in South Africa are directly aligned with the objectives and approaches of the global project. While UNDP/DBSA will manage the project in South Africa, both UNDP and UN Environment will collaborate in knowledge-sharing with other child projects and with the global project overall. See description in UNDP ProDoc, Section 4.4).

A.3. Stakeholders

Please provide the Stakeholder Engagement Plan or equivalent assessment.

In addition, provide a summary on how stakeholders will be consulted in project execution, the means, and timing of engagement, how the information will be disseminated, and an explanation of any resource requirements throughout the project/program cycle to ensure proper and meaningful stakeholder engagement.

The table below presents the Stakeholder Engagement plan and summarizes different categories of stakeholders, which are described in more detail in the UNDP and DBSDA.

Stakeholder group or organisation	Means of engagement
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Government ministries and agencies	<p>Policymakers, officials and technical staff within government ministries will play a crucial role in the implementation of the proposed program. The Department of Energy, will be in the Implementing Agency (IA) and will take a leadership role in the Project Board in providing direction to the Project. DOE staff will work closely with full-time project staff and short-term experts on many aspects of implementation, particularly policy-related aspects, regulatory aspects, capacity building and awareness creation and promotion.</p> <p>DEA is the government institution responsible for environmental issues, policy and planning, and will play a key role because climate mitigation activities as well as mercury control competencies rely on this body. DEA is the GEF Operational Focal Point, and therefore has an overall interest in the Project. DEA will in particular be involved in Component 4 on environmentally sound management of lighting and transformers</p> <p>The Department of Trade and Industry (DTI) is responsible for the transformation and the development of the trade and industry sectors, and will be interested promoting local production (Output 2.3). Its agencies for standards and quality control (SABS, NCRS, and SANAS) will be involved (with DoE) in administration and implementation of a mandatory MEPS and labelling system for lighting and regulation of standards</p>
Eskom and municipal energy service providers	<p>Eskom and the municipal utilities have an incentive to encourage efficiency to lower capital costs for infrastructure (see, e.g., the peak load demand reduction estimates in Annex F).</p> <p>Eskom will participate in communication, campaign and awareness through its IDM (Integrated Demand Management). Eskom will particularly play a role in defining a standard and MVE system for transformers (Outcome 1), providing data for market assessment, and general in capacity building and promoting local production activities of efficient transformers (Outcome) and environmental aspects (Outcome 3).</p> <p>Municipalities play an important role in designing municipal green and sustainable energy plans and propose investment projects on public buildings (incl. lighting) and infrastructure (incl. street lighting, distribution networks), and play an important role in awareness creation for their citizenry on sustainable practices (incl. proper waste disposal and efficient lighting).</p>
Testing laboratories and technical institutions	<p>Test procedures are an important technical foundation for MEPS. Testing laboratories will take part in the process of developing standards and quality control measures (Component 1)</p>

Environmental, consumer and women's groups and organisations	<p>Non-governmental organizations that advocate responsible energy policies will contribute their perspectives during the development of the national strategy for energy-efficient products. They will provide a balancing perspective to manufacturers with regard to the stringency of MEPS and MVE schemes. Input from civil society consumer groups can ensure that regulations do not require overly expensive or less functional lighting, appliance products and equipment. This includes the role of women groups and organisations to stress the importance of women-led households, women-owned businesses (WOB) and in the Project itself, gender-sensitive data gathering and reporting.</p>
Manufacturers, importers, distributors and retailers of lighting products, and transformer equipment	<p>Manufacturers, importers, distributors and retailers are directly affected by energy efficiency regulations. They have valuable information about production costs and market structures. MEPS necessarily impose some burdens on manufacturers and importers, but these can be acceptable as long as they affect all companies equally and also introduce new business opportunities. Domestic and international firms will provide their input. Equipment retailers will comment on the proposed program and its future implementation by characterizing the market and consumer response to product efficiency and pricing.</p> <p>In order to ensure industry readiness of local industry, the program offers support to local manufacturers and assembly companies to ensure they can produce LED products and high-efficiency distribution transformers in a sustainable manner.</p>

The Project will effectively engage the stakeholders involved in the project to get their support and guide the project implementation to achieve higher results.

Project outreach proposed includes project website, media (print/audio-visual), workshops, training etc.

The PMU and the Project Board will ensure that the Gender Action Plan recommended by the project is pursued and implemented. The various groups especially women will be engaged during the consultation meetings, prioritized to avail the program and be included in the different capacity building programs. The project will also ensure that it is in line with the (baseline) national energy, climate change, gender, and waste management policies and plans (described in Annex E);

Meetings, monitoring visits, surveys, and written communications will be used to receive feedback to continue the ongoing dialogue as well as during the course of implementation.

The project will follow a participatory approach in decision making by engaging all the relevant stakeholders. The Government agencies, NGOs, CSOs, and the private sector actors will be actively involved during the project implementation.

Responsibilities

The PMU is primarily responsible for carrying out the specified stakeholder engagement activities. The stakeholders will be engaged while carrying out various assessments and studies, training and workshop events.

Grievance mechanism

People concerned with or potentially affected by the project can express their grievances for consideration and redress. The Project Management Unit will receive grievances and will try to resolve at the PMU level if possible. If not possible then the issues will be referred to the Project Board that will try to settle the issues amicably. In the event the party is not accepting the decision then he/she can put the case to Arbitration. Any person or group of persons affected by a UNDP-supported project can make a claim to the Claims to the UNDP Social and Environmental Complaints Unit (SECU) and the SRM (Stakeholder Response Mechanism) through <https://undp.tnwreports.com> and by e-mail (<https://undp.tnwreports.com>).

Monitoring and reporting

The project stakeholders would be engaged at various levels to carry out the monitoring activities. Then the PMU will liaise with relevant Government agencies and other partners and collect data and monitor the activities on a regular basis. The PMU will report back the results to the stakeholders at the earliest through letters or conduct meetings both individually as well as through engagement of all relevant agencies.

Communications plan

The LCUD project will also emphasize strong communications with a broader range of stakeholders. Key elements of the project's communication strategy are outlined in the table below:

Key element	Relevant group	Means
1. Project governance meetings; Project Board meetings; Advisory Committee and working group meetings	All stakeholders that are members of the Board or its Working Groups or are invited to attend	Meetings

2. Seminars/workshops and training events, including the Inception workshop, and End-of-project workshop	National and city-level government officials Financial and private sector NGOs and CSOs Municipalities and municipal associations	Workshop, meeting, seminar, training On-the-job training
3. Project documents, thematic reports and publications	Various government departments and decision-makers	Direct dissemination (e.g. email or hard copy) to persons. Access via the Project website
4. Technical and financial-economic reports.	Development banks and other financial intermediaries; energy service companies Engineers and persons working or interested in working in lighting, EE in buildings, electricity distribution, and environmental issues Energy, waste and urban planners and city officials Development partners and NGOs	Direct dissemination (e.g. email or hard copy/ USB-drive) Access via the Project website to reports and documents and database and info systems
5. Project knowledge capturing and info dissemination	Government (national, city) officials Financial and private sector Development partners and NGOs Citizenry and community groups	Online access to all project materials and other relevant low-carbon and green development information
6. Reports (feasibility assessments; non-confidential parts of business plans; monitoring) of investments in EE lighting and transformers application and production	Various national and municipal level officials; CSOs Financial and private sector Development partners Technical professionals; experts/ academics	Direct dissemination to person directly involved Summaries with non-confidential info access through the website

Budget available is part of the various project activities. The budget for seminar/workshops/events and printing of reports and documents, etc., is, together, about USD 850,000

Documents

Title

Submitted

In addition, provide a summary on how stakeholders will be consulted in project execution, the means and timing of engagement, how information will be disseminated, and an explanation of any resource requirements throughout the project/program cycle to ensure proper and meaningful stakeholder engagement.

Select what role civil society will play in the project:

Consulted only;

Member of Advisory Body; Contractor; Yes

Co-financier;

Member of project steering committee or equivalent decision-making body;

Executor or co-executor;

Other (Please explain)

Non-governmental organizations that advocate responsible energy policies will contribute their perspectives during the development of the national strategy for energy-efficient products. They will provide a balancing perspective to manufacturers with regard to the stringency of MEPS and MVE schemes. Input from civil society consumer groups can ensure that regulations do not require overly expensive or less functional lighting and equipment. This includes the role of women groups and organisations. Relevant NGOs and women's organisations will be asked (at Project inception) to participate in one or more of the Project's Working Groups (see Section A.6)

A.4. Gender Equality and Women's Empowerment

Please briefly include below any gender dimensions relevant to the project, and any plans to address gender in project design (e.g. gender analysis).

The Child Project Concept Note did not contain significant gender mainstreaming analysis or action planning. This analysis has been prepared in the project preparation (PPG) phase. The UNDP Project Document have sections on 'mainstreaming gender' (see its Section 4.6) with further details provided in the Gender Analysis and Action Plan (Annex D) in both the UNDP and DBSA Project Documents

Documents

Title

Submitted

Does the project expect to include any gender-responsive measures to address gender gaps or promote gender equality and women empowerment?

Yes

If yes, please upload document or equivalent here

The Gender Action Plan is attached as Annex D.2 to the Project Document

If possible, indicate in which results area(s) the project is expected to contribute to gender equality:

Closing gender gaps in access to and control over natural resources;

Improving women's participation and decision making Yes

Generating socio-economic benefits or services or women

Will the project's results framework or logical framework include gender-sensitive indicators?

Yes

These indicators are mentioned in the Results Framework (see Annex A) and gender-sensitive indicators are summarized separately in the Gender Action Plan (to be found as Annex D.2 in both the UNDP and DBSA ProDoc)

A.5. Risks

Elaborate on indicated risks, including climate change, potential social and environmental risks that might prevent the project objectives from being, achieved, and, if possible, the proposed measures that address these risks at the time of project implementation.

The Concept Note does not have a section on risk analysis. This has been prepared for the Project Documentation and can be found in the UNDP ProDoc, Section 4.3 and in DBSA ProDoc, Annex J

A.6. Institutional Arrangement and Coordination

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

Relevant GEF initiatives:

- U4E will provide broader contacts and coordination, especially with other child projects of the global leapfrogging project, in sharing experience, best practices, and lessons learned and with other recent UNEP and UNDP-supported projects funded by GEF on efficient lighting, appliances and equipment in Costa Rica, Bolivia, Peru, Chile, Morocco, Tunisia, Sudan, Turkey, Jordan, Kazakhstan, Pakistan, Myanmar and Indonesia. UNDP will invite representatives of the projects in these countries to attend the closing (and other) workshop(s) of the project in South Africa, and to deliver presentations and disseminate their own materials.
- Environmentally sound management and disposal of PCBs is subject of a GEF proposal currently under preparation by DBSA and which will include the issue of PCBs in transformers.

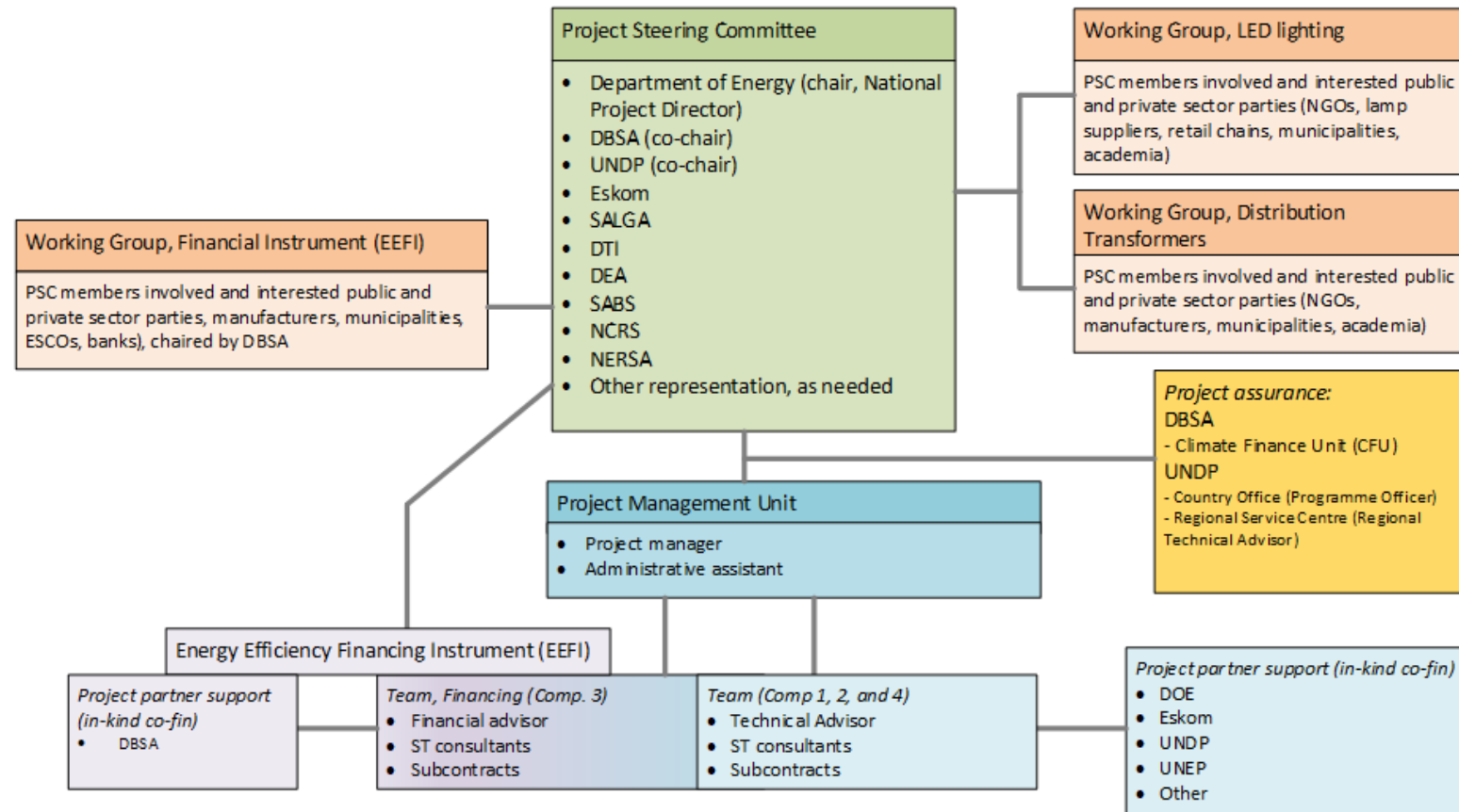
- UNEP/DBSA GEF-funded project Building a resilient and resource-efficient Johannesburg: Increased access to urban services and improved quality of life.

The Box outlines Project's governance and management structures, including the different roles and responsibilities of the parties involved in governing and managing the project. The project governance structure will ensure UNDP's and DBSA's accountability for programming activities, results, monitoring and management of risks, and the use of resources, while at the same time fostering national ownership and alignment with national processes. The different roles and responsibilities within the Project's governance structure and project staffing are summarised in the Box are described in detail in the UNDP Project Document (Section 8) and DBSA (Section 1, Part 3). Their Annex C presents the Terms of Reference of the Project Board and of key Project staff positions.

The GEF Implementing Agencies (IA) are UNDP and DBSA. The Implementing Partner (GEF local executing agency) for this project is the Department of Energy (DOE).

The project will work closely other government Department (DTI, DEA) and government agencies under these Department (such as SANEDI, SABS, NCRS, NERSA) as well as associations and organisations of local government (such as SALGA and AMEU) and private sector and NGOs.

Box Project governance and management structure



Additional Information not well elaborated at PIF Stage:

A.7. Benefits

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

The 'Child Project Concept Note that does not include this section A.7. A summary of benefits is provided below:

Socio-economic benefits

Appliance and equipment efficiency standards are well known as being among the very most cost-effective instruments^[1]¹ for achieving energy savings^[2]², cost savings for consumers, and associated GHG emissions reduction at scale. Standards and labelling offer such remarkable cost-effectiveness because they affect entire market sectors involving annual sales of tens or hundreds of thousands of electricity-intensive products, using policy and an efficient laboratory-based enforcement process, leading ultimately to market transformation that is sustained mostly through consumer demand and competition among producers.

High-efficiency appliances will provide end-users savings on the total lifecycle costs of the product through reduced electricity use, allowing for purchasing power for an improved standard of living. Further, the end-users (men and women) are empowered through increased visibility in the quality and efficiency of the product through energy-efficiency labelling.

Local manufacturers stand to benefit by increasingly stringent energy efficiency standards and strategies by producing higher-efficient products that meet the need of local markets and also the possibility to enter new markets that have existing energy efficiency standards, such as in OECD countries. The project will also provide economic benefits by promoting regional harmonisation of standards (on lighting and transformers). This will reduce the costs of doing business for manufacturers that otherwise would need to comply with different standards in each country. Further, the benefits will be provided across the economy, as businesses will be able to produce goods more efficiently due to improved technologies and the ability to export these within the Eastern and Southern African region (common market arrangements, SADCC, COMESA). Lastly, the economy as a whole stand to benefit from increased energy efficiency in the economy will allow for reduced imports of fuel sources.

Environmental impacts

Unlike GEF-supported projects that involve large investments in a few demos (e.g. wind or solar parks), the Project implies investment/purchase decisions of a multitude of residential and other consumers in small investments of USD 2 to 6,000. The Project defines 'direct emissions' not as linked to one or more small investment projects, but based on a calculated difference during the implementation period (2019/20-2022/23) between a market baseline scenario (which assumes a modest replacement of LEDs for other lamps and HE transformers) and an alternative pathway (followed partly due to the Project intervention) which increased purchase or investments in more high-efficiency products. These are based on detailed market growth assessment of the different types of lighting products and their energy consumption, presented in detail in Annex F.

[1] For example, Lawrence Berkeley National Laboratory estimated in 2004 that standards implemented at a cost of USD 2 in federal government spending per household had triggered investment in energy-saving features equaling USD 1,000 per household, resulting in USD 2,170 gross savings per household in fuel costs, and an increase of more than USD 1000 of net present value per household to the U.S. economy during the operating lifetimes of the affected products. See Meyers, S, J. McMahon, and M. McNeil. 2004. *Realized and Prospective Impacts of U.S. Energy Efficiency Standards for Residential Appliances: 2004 Update*. Berkeley, CA, Lawrence Berkeley National Laboratory, LBNL-56417

[2] A similar analysis in 2003 by the International Energy Agency determined that EESL in OECD countries would lead to cumulative net cost savings of EUR 137 billion by 202. Source: OIEA (International Energy Agency). 2003. *Cool Appliances: Policy Strategies for Energy-Efficient Homes*, OECD/IEA, Paris, France.

A similar baseline-alternative assessment was carried out by U4E and en.lighten for lighting, refrigerators, air-conditioners, transformers, and electric motors, in which the savings are calculated in a Policy scenario (based on ‘best current’ global MEPS) and a more aggressive BAT scenario (‘current best available technology’). The estimates of impacts combined for lighting and distribution presented in the UNDP Project Documents (see Annex E) of energy savings of 129 TWh and reduced lifetime GHG emission of 117 MtCO₂ over 2019-2030 correspond with the estimates of impacts in the U4E Policy scenario with energy savings of 120 TWh and lifetime CO₂ emission reduction of 116 MtCO₂ over the period 2020-2030. The direct emission reduction (influenced by the Project over 2019-23) implies a GEF expenditure of under USD 0.19 per tonne of avoided CO₂ emissions .

Box Summary of direct greenhouse gas emission reduction

<i>Cumulative energy savings and emission reduction</i>	LED Lighting		Distrib. Transformers		Total	
	<i>Savings</i> <i>GWh</i>	<i>Emissions</i> <i>ktCO₂</i>	<i>Savings</i> <i>GWh</i>	<i>Emissions</i> <i>ktCO₂</i>	<i>Savings</i> <i>GWh</i>	<i>Emissions</i> <i>ktCO₂</i>
Direct (2019-2023)*	36,751	33,755	1,523	1,391	38,274	35,146
Consequential (2024-2030)*	73,511	64,964	17,938	16,169	91,449	81,134
Total (2019-2030)	110,262	98,719	19,461	17,560	129,723	116,279
U4E Country assessment						
Cumulative benefits (2020-2030)	90,300	89,600	30,000	27,000	120,300	116,600

* Difference between alternative and baseline scenario in the period indicated (see Annex F)

Notes: Based on UNEP/U4E *South Africa, Country Assessment* sheet (2016), for assumptions and data sources, [see http://united4efficiency.org/countries/country-assessments/](http://united4efficiency.org/countries/country-assessments/)

Lighting devices are used at peak-load demand. By reducing the peak load, it will not only reduce the occurrence of blackouts but it will also reduce the peak-load generation, which is often the most expensive. By 2030, the peak load reduction of the alternative scenario over the baseline that is attributed to the Project's (direct and direct) influence will be 223 MW.

Beyond the greenhouse gas emission reductions that will be delivered through increased energy efficiency, the project offers further global and local environmental benefits. For each technology, the project will implement best practices in environmentally sound management:

- Old technology that is phased out and some efficient and advanced lighting technologies may contain hazardous substances, in particular mercury. The project will continue to assist countries to plan collection and recycling programmes to ensure that mercury from spent lamps is not released into the environment and that lighting products classified as electronic waste are properly collected and recycled.

- The Project will be supported research and assessment of issues and options regarding the replacement of mineral oils used in certain type of transformers by vegetable oil. Old transformers may contain polychlorinated biphenyls (PCBs) and ensuring environmentally sound disposal of the PCBs is dealt with in the DBSA/GEF project “Environmentally Sound Management and Disposal of PCBs”. By 2030, the mercury in the lamping stock in the alternative scenario over the baseline that is attributed to the Project’s (direct and indirect) influence will be about 2.0 tons of mercury (see Annex F).

A.8. Knowledge Management

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

The Project will effectively engage the stakeholders involved in the project to get their support and guide the project implementation to achieve higher results.

- Project outreach proposed includes project website, media (print/audiovisual), workshops, training, and awareness campaigns
- The PMU and the Project Board will ensure that the Gender Action Plan recommended by the project is pursued and implemented. The various groups especially women will be engaged during the consultation meetings, prioritized to avail the program and be included in the different capacity building programs. The project will also ensure that it is in line with national energy, climate change, and waste management policies and plans (described in Section B of this CEO ER Doc);
- Meetings, monitoring visits, surveys, and written communications will be used to receive feedback to continue the ongoing dialogue as well as during the course of implementation.
- The project will follow a participatory approach in decision making by engaging all the relevant stakeholders. The Government agencies, NGOs, CSOs, and the private sector actors will be actively involved during the project implementation.

Knowledge management and communication activities are summarized below (taken from Annex G in the UNDP Project Document):

Key element	Relevant group	Means
1. Project governance meetings; Project Board meetings; Advisory Committee and working group meetings	All stakeholders that are members of the Board or its Working Groups or are invited to attend	Meetings

2. Seminars/workshops and training events, including the Inception workshop, and End-of-project workshop	National and city-level government officials Financial and private sector NGOs and CSOs Municipalities and municipal associations	Workshop, meeting, seminar, training On-the-job training
3. Project documents, thematic reports and publications	Various government departments and decision-makers	Direct dissemination (e.g. email or hard copy) to persons. Access via the Project website
4. Technical and financial-economic reports.	Development banks and other financial intermediaries; energy service companies Engineers and persons working or interested in working in lighting, EE in buildings, electricity distribution, and environmental issues Energy, waste and urban planners and city officials Development partners and NGOs	Direct dissemination (e.g. email or hard copy/ USB-drive) Access via the Project website to reports and documents and database and info systems
5. Project knowledge capturing and info dissemination	Government (national, city) officials Financial and private sector Development partners and NGOs Citizenry and community groups	Online access to all project materials and other relevant low-carbon and green development information
6. Reports (feasibility assessments; non-confidential parts of business plans; monitoring) of investments in EE lighting and transformers application and production	Various national and municipal level officials; CSOs Financial and private sector Development partners Technical professionals; experts/ academics	Direct dissemination to person directly involved Summaries with non-confidential info access through the website

The project design was informed by UNDP's earlier project (3277 on Standards and Labeling in South Africa), and also by UNDP's lighting projects done before (including under Enlighten platform led by UNEP in its initial conception, and now continued by the U4E platform that UNDP is also a partner of) as well as UNDP's own portfolio of prior EE lighting projects (these are almost all GEF financed, e.g. in China, Ukraine, Russia, Kazakhstan, Egypt and others).

On new knowledge products and training/conferences etc to be done under the new child project, this will be guided mostly through U4E and UNEP's lead role in the global Leapfrogging Program Framework Document, and our project in South Africa is one of several in this grouping. It will benefit both from exchanges with sister projects managed by UNDP (in Sudan, Kazakhstan and Indonesia) and others handled by UNEP. On transformers the project will establish and exchange link with the UNDP Kazakhstan project, which also has a focus on transformers. Also, the Project will the project will seek cooperation with relevant international organisations, for example, the International Copper Association, or the inter-governmental Super-efficient Equipment and Appliance Deployment (SEAD) Initiative.

B. Description of the consistency of the project with:

B.1. Consistency with National Priorities

Describe the consistency of the project with nation strategies and plans or reports and assessments under relevant conventions such as NAPAs, NAPs, ASGM NAPs, MIAs, NBSAPs, NCs, TNAs, NCSAs, NIPs, PRSPs, NPFE, BURs, INDCs, etc.

The project falls within the **GEF-6 programme area** “Promote the timely development, demonstration, and financing of low-carbon technologies and mitigation options” (Programme 1) of the Climate Change focal area’s Objective #1 (CCM-1), “Promote Innovation, Technology Transfer, and Supportive Policies and Strategies”. Three Outcomes mentioned in the GEF-6 Results Framework^[1] (under Programme 1) are relevant, namely Outcome A (Accelerated adoption of innovative technologies and management practices for GHG emission reduction and carbon sequestration), Outcome B (Policy, planning and regulatory frameworks foster accelerated low GHG development and emissions mitigation), and Outcome C (Financial mechanisms to support GHG reductions are demonstrated and operationalized).

The **National Sustainable Development Strategy** has been integrated into the National Development Plan, which contributes to global Sustainable Development Goals (SDGs). The ‘transition towards a green economy’ is one of the priority areas mentioned. More specifically this priority area includes “economic growth and employment, while preventing environmental degradation and pollution”, with ‘clean energy and energy efficiency’ as one of its focus areas. The 17 **Sustainable Development Goals (SDGs)** were adopted in 2015 by the international community, including South Africa, as part of the UN 2030 Agenda for Sustainable Development. *Goal 7* specifically deals with sustainable energy and energy efficiency. It is also aligned with *Goal 13* on climate action and its targets of integrating climate change measures into national policies, strategies and planning, and of improving education, awareness-raising and human and institutional capacity on climate change mitigation. In addition, there are various indirect linkages of sustainable energy with some of the other SDGs (number 8, 9, 11, and 12).

The overall framework for energy efficiency is present in the form of policy documents, such as the National Energy Efficiency Strategy of (2005, reviewed in 2008) and the **Post-2015 National Energy Efficiency Strategy** (draft published in the Government Gazette in Dec 2016 for public comments, see Annex E), which aims for energy efficiency improvement by 2030 of 16% (using a baseline of 2015) to be achieved in a number of areas, buildings, appliance & equipment, lighting, transport, industry, energy utilities.

A number of **national standards** are relevant to the Project. The standard *SANS 941 on Energy efficiency of electrical and electronic apparatus* covers energy efficiency requirements, measurement methods and appropriate labelling of energy-efficient electrical and electronic apparatus. The *Compulsory specification for energy efficiency and labelling of electrical and electronic apparatus (VC 9008)* was enacted in 2014 and came into force in 2015, making the SANS 941 a compulsory standard. It requires that a range of electrical and electronic apparatus (dishwashers, washing machines, tumble dryers and/or washer-dryers, refrigerators and/or freezers, electric ovens, storage water heaters) adhere to certain minimum energy performance standards. It also requires that all appliances listed display the energy efficiency rating on the appliance. *SANS 1544 Energy performance certificates for buildings* specifies the methodology for calculating energy performance in existing buildings. It will initially be a voluntary standard but may become a mandatory standard through the NRCS regulation process (the regulations for the mandatory display of energy performance for buildings have been published). There are no energy performance standards on distribution transformers.

The **National Environmental Management Waste Act** (2008) has implications for e-waste management and makes it illegal for individuals or companies to send e-waste to landfills. DEA is considering to split the two categories, e-waste and lighting, and to be dealt with separate waste management plans. In November 2011 the National Waste Management Strategy (NWMS) was established to achieve the objects of the Act.

The **National Development Plan (NDP)** for South Africa provides a “2030 vision” to guide the country’s development trajectory such that poverty is eliminated and inequalities are reduced by 2030. Furthermore, the NDP states that climate change is already having an impact on South Africa and recognises the need to ensure that society and the natural environment are protected from the adverse effects of climate change. South Africa aims to put in place a mitigation system, to realise the opportunities of a low-carbon economy while being mindful that a just transition requires time and careful development.

The mitigation component of South Africa's **Intended Nationally Determined Contributions (INDC)** envisages five-year periods of implementation at the national level for policy instruments under development, including a carbon tax, desired emission reduction outcomes for sectors, and company-level carbon budgets. The aspiration in the long-term is that total annual GHG emissions will be in the range of 212 to 428 million tons of CO₂ by 2050, having declined in absolute terms from 2036 onwards.

[1] *GEF-6 Programming Directions*, (Extract from GEF Assembly Document GEF/A.5/07/Rev.01, May 22, 2014

C. Describe The Budgeted M & E Plan:

GEF M&E requirements	Primary responsibility	Indicative costs to be charged to the Project Budget (US\$)		Time frame
		GEF grant	Co-financing	
Inception Workshop	UNDP Country Office (CO) and DBSA	USD 11,750	USD 5,000	Within two months of project document signature
Inception Report	Project Manager (and consultant)	None	USD 5,000	Within two weeks of inception workshop
Standard UNDP monitoring and reporting requirements as outlined in the UNDP POPP	UNDP CO	None	None	Quarterly, annually
Monitoring of indicators in project results framework, including updating GEF tracking tool	Project Manager (and consultants)	USD 15,000	USD 5,000	Annually before PIR; updating tracking tool before MTE and TE missions
GEF Project Implementation Report (PIR)	Project Manager, DBSA and UNDP (CO and UNDP-GEF team)	None	None	Annually
Lessons learned and knowledge generation	Project Manager	USD 8,100	USD 20,000	Annually
Monitoring of environmental and social risks; Corresponding management plans and addressing grievances as relevant	Project Manager UNDP CO	None	None	On-going
PSC meetings and supervision	PSC, DBSA, UNDP CO Project Manager	None	USD	At minimum annually
Oversight missions UNDP-GEF; GEF Secretariat learning missions/site visits	UNDP-GEF team, UNBDP CO, DBSA	None	None	Troubleshooting as needed
Independent Mid-term Review (MTR) and management response	DBSA, UNDP CO, Project team and UNDP-GEF team	USD 29,200	USD 7,500	<i>Between 2nd and 3rd PIR.</i>

GEF M&E requirements	Primary responsibility	Indicative costs to be charged to the Project Budget (US\$)		Time frame
		GEF grant	Co-financing	
Independent Terminal Evaluation (TE) including management response	DBSA, UNDP CO, Project team and UNDP-GEF team	USD 29,200	USD 7,500	At least three months before operational closure
End-of-project report and workshop	DBSA, UNDP and Project Team	USD 11,750	USD 30,000	
TOTAL indicative COST (excluding project team staff time, and UNDP staff and travel expenses)		USD 105,000	USD 80,000	

Details are given in M & E Plan of the UNDP ProDoc (Section 7) or the DBSA ProDoc (Section 1, Part 4).

It should be noted that, as per GEF instructions, audit services are considered part of ‘project management cost’

Audit service	UNDP, , DBSA	USD 15,000	None	Annually and/or as per DBSA and UNDP audit policies
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PART III: Certification by GEF partner agency(ies)

A. GEF Agency(ies) certification

GEF Agency Coordinator	Date	Project Contact Person	Telephone	Email
Pradeep Kurukulasuriya	4/30/2019	Marcel Alers	2129066199	marcel.alers@undp.org

ANNEX A: PROJECT RESULTS FRAMEWORK (either copy and paste here the framework from the Agency document, or provide reference to the page in the project document where the framework could be found).

	Objective and Outcome Indicators	Baseline (2017/18)	Mid-term project target (MoP, 2021)	End of Project (EoP) target (2023)	Data collection methods and risks/assumptions
Project Objective: Accelerating South Africa's efforts to transition the economy to energy-efficient products, by a) developing South Africa's market for LEDs on the electricity demand-side, and b) developing South	1) Reduction in electricity consumption by high efficient lighting (LED) and distribution transformers	62.0 TWh of electricity per year consumed by lamps is projected to decline to 49.4 TWh at EoP under business as usual and to 46.0 TWh in 2030. Losses due to transformers in 2018 were 18.7 TWh which will increase to 21.5 TWh at EoP and 26.1 TWh in baseline	In the alternative scenario, annual energy savings over the baseline (of 53.4 TWh) of 7.5TWh at MoP (2021) Losses in the alternative scenario are reduced with 0.13 TWh to 20.2 TWh at MoP (2021)	In the alternative scenario, annual energy savings over the baseline of 8.5TWh at EoP (2023) and in 2030 savings of 11.4TWh (energy consumption due to lighting in 2030 is 34.6 TWh in the alternative). Losses in the alternative scenario are reduced with 0.87 TWh to 20.6 TWh at EoP (2023) and with 3.8 TWh to 22.3 TWh annually in 2030	The baseline and target values are based on the energy savings and emission reduction estimates that are partly based on information in U4E country assessment (lighting) and Eskom/NERSA data (transformers) and technical information in appliances from other sources, as explained in Annex E to the UNDP ProDoc. Information on baseline values and prognoses (2021, 2030) will

	Objective and Outcome Indicators	Baseline (2017/18)	Mid-term project target (MoP, 2021)	End of Project (EoP) target (2023)	Data collection methods and risks/assumptions
Africa's market for high-efficiency distribution transformers on the electricity supply-side, resulting in climate change mitigation, stable power supply and therefore economic development and improved energy access.	2) a. Reduction in GHG emission from electricity consumption by LEDs and high-efficiency transformers (linked with indicator 1) b. Emission reduction attributable to Project [GEF Indicator 6]	a. 63.4 ktCO ₂ of GHG emissions due to lighting is projected to decline to 44.9 ktCO ₂ at EoP under business as usual and to 43.4 ktCO ₂ in 2030. Emissions due to transformer losses in will increase to 19.8ktCO ₂ at EoP (2023) and 23.1 ktCO ₂ in 2030	a. In the alternative scenario, the additional GHG emission reduction (over the baseline) of 7.5 ktCO ₂ at EoP (2021, baseline emissions are 53.5 ktCO ₂) Emissions due to transformer losses in the alternative scenario are reduced with 0.12 ktCO ₂ to 19.0 ktCO ₂ at MoP. b. Taking into account a causality factor (CF), cumulative savings 2019-2021 (over the baseline) are 9.1 ktCO ₂	a. In the alternative scenario, the additional GHG emission reduction (over the baseline) of 8.1 ktCO ₂ at EoP (2023, emissions are 44.9 ktCO ₂) and in 2030 emission reduction of 10.7 ktCO ₂ annually over the baseline (GHG emissions due to lighting in 2030 are 32.7 ktCO ₂). Emissions due to transformer losses in the alternative scenario are reduced with 0.81 ktCO ₂ h to 19.2 ktCO ₂ at EoP (2023) and with 3.4 ktCO ₂ to 19.8 ktCO ₂ annually in 2030. b. Taking into account a causality factor (CF), cumulative savings 2019-2023 (over the baseline) are 21.1 ktCO ₂ (CF=60%) and over 2024-2030	be updated in market assessments and other studies the Project will carry out (see Output 1.1 and Indicator 5) As above. <i>Assumption:</i> The objectives of the project remain in line with the priorities of the South African government
	3) a. Number of household LED lamps installed gender-disaggregated and b. Share of LED lamps in the country stock (of installed lamps) c. Number of beneficiaries [GEF Indicator 11]	a. An estimated 0.5 million household purchase LED lamps in 2017 b. Share of 5% by LEDs in lamp stock in 2017 (based on estimates and calculations of Annex F)	a. In baseline 2.6 million HH will have LED lighting installed and 6.1 million in 2021 (alternative) b. Share of 17% of LEDs by MoP in baseline scenario and 36% by MoP in alternative scenario c. Based on indicator 3a, 11 million beneficiaries (50% men, 50% women)	a. In alternative 4.1 million HH will have LED lighting installed in 2023 over the baseline, or 12.7 individuals (households consist of 50% men and 50% women) b. Share of 20% of LEDs by EoP and 31% by 2030 in baseline scenario and 49% by EoP and 75% by 2030 in alternative scenario c. Based on indicator 3a, 12.7 million beneficiaries (50% men, 50% women). Using CF=60%, direct beneficiaries are 7.6 million people (2.5 million households)	As above. Surveys will include number and gender of members of the household.

	Objective and Outcome Indicators	Baseline (2017/18)	Mid-term project target (MoP, 2021)	End of Project (EoP) target (2023)	Data collection methods and risks/assumptions
Outcome 1 Strengthened government capacity and regulatory frameworks for LEDs and distribution transformers	4) Completed market studies on demand, use and supply of lamps and on distribution transformers	No full comprehensive and coherent market overview exists	Market assessments by yr1: One (1) on lighting products stock demand and supply; One (1) market assessment carried out on transformers production, installation and stock	End-of-project market assessments carried out, comparing results with the first-year market assessments	Markey survey report and supporting data (Excel, statistical analysis software) Data to be collected by means of reports, statistical and sales data from suppliers/producers, customs, Eskom, NERSA, supplemented by customer, retailer and supplier surveys (linked with Indicators 11 and 15). <i>Assumption/risk:</i> willingness of companies and agencies to share data
	5) Status of action plans for large-scale introduction of LED lamps and high-efficiency distribution transformers	No action plans on efficient lighting or high-efficiency transformers at national government level	Action plan formulated for (LED) efficient lighting and one action plan for high-efficiency transformers by end of yr2	Action plans revised (as needed) in yr 4 based on final the results and achievements of the Project	Minutes of meeting of working groups (on lighting and one on transformers) that discuss draft action plans. Publication of action plans <i>Assumption/risk:</i> The Action Plans will be ensured through formation of Working Groups (see Project management section) and as a mechanism for regular consultations. Assumed strong involvement of national agencies in the project

	Objective and Outcome Indicators	Baseline (2017/18)	Mid-term project target (MoP, 2021)	End of Project (EoP) target (2023)	Data collection methods and risks/assumptions
	6) Availability of updated information on products and on their compliance with standards and labels	No register or web portal on energy performance of LED and transformers South Africa	One (1) register/web portal on compliant products and results of MVE (Outcome 3) set up under UNDP/GEF standards and labelling project with new data collected and analysed on LEDs and distribution transformers	Register and web portal are operational, with complete and regularly updated data collection on energy performance of (LED) lighting, and distribution transformers (e.g., as part of existing website)	<i>Assumption / risk:</i> register and web portal will be established and database of compliant products regularly updated. Manufacturers, suppliers contribute to database with reliable and complete data so that integrity is maintained
	7) Status of minimum energy performance standards (MEPS) for LEDs and energy labels for LEDs	Mandatory MEPS and energy labelling for selected appliances, but not yet for LED lamps-luminaires distribution transformers	Proposal for MEPS and energy label categories for LED lamps (under discussion DoE, NRCS, SABS) and MEPS for distribution transformers (under discussion DoE, NRCS, NERSA, SABS)	Compulsory MEPS and energy label categories for LED lamps; and MEPS for distribution transformer	MEPS and labelling regulations to be circulated for public comment and then gazette. Stakeholder consultation reports. <i>Assumptions/risks:</i> Major stakeholders (public and private) support the project objectives and adhere to the timeline for enactment of the regulations. This assumption will be ensured through the formation of the stakeholder Working Groups and regular consultations. Stakeholders actively participate in providing market data and the review of the engineering /cost-benefit analysis. Necessary legislation is drafted and enacted

	Objective and Outcome Indicators	Baseline (2017/18)	Mid-term project target (MoP, 2021)	End of Project (EoP) target (2023)	Data collection methods and risks/assumptions
	8) Operational status of testing and certification laboratories in support of energy performance standards and labelling for LED (and other lighting products) and distribution transformers	Two (2) labs are accredited by SANAS for photometric testing according to international standards. Quality control of distribution transformers by Eskom as part of contracts	At least three (3) labs are accredited by SANAS for photometric testing according to international standards.	<p>At least three (3) labs are accredited by SANAS for photometric testing according to international standards and at least one independent lab for distribution transformers testing (or at least the number of test labs needed to be able to test the desired volume of devices needs for the implementation of MEPS and/or labelling)</p> <p>Note: The exact number and identity of the laboratories will be determined based on detailed analysis during the first project year of laboratory capacity, equipment costs, administrative issues, and expected volumes of equipment to be tested. The indicator is to be assessed based not on number of laboratories, but rather capacity to fully handle all national certification needs</p>	<p>Audit reports of test labs. Product validation reports from test labs. Accreditation confirmation of test labs.</p> <p><i>Assumptions/risks:</i> part of MVE activities can be recovered by levies charged by NCRS on the regulated products, in addition to assumed resources committed by the Government. Commitment from the side of suppliers, distributors, manufacturers. Public sector funding to is made available to upgrade test facilities, if not, private sector test lab engagement will be sought</p>

	Objective and Outcome Indicators	Baseline (2017/18)	Mid-term project target (MoP, 2021)	End of Project (EoP) target (2023)	Data collection methods and risks/assumptions
Outcome 2 Awareness and knowledge enhanced amongst technology users, financiers and supplier	9) Impact of consumer awareness of energy efficiency, MEPS and labels for lighting products, as reflected in the share of affirmative survey responses (<i>broken out by gender</i>)	Awareness of energy efficiency amongst consumers in lighting exists, but geared towards CFLs (residential-commercial), T8-T5 in LFL and HID-HPS (instead of HID-MV) in outdoor/street lighting. Less awareness on (economic) benefits from using LED lamps. Municipalities have little or no awareness on high-efficiency transformers	Surveys after first awareness campaigning show 15% increase in affirmative response on benefits (energy and monetary savings) of LED lighting (<i>both men and women</i>) 15% increase in municipalities that consider high-efficient transformers in their EE plans	Surveys after awareness campaigning and other knowledge enhancement activities of the Project show 50% increase in affirmative response on benefits (energy and monetary savings) of LED lighting (both men and women) 50% increase in municipalities that consider high-efficient transformers in their EE plan	Consumer awareness data to be collected in surveys and focus groups at the beginning and final year of the Project linked with the overall market survey (Indicator 5). <i>Surveys will contain data on both the gender of the respondent</i> <i>Assumption/risks:</i> strong involvement of retailers and distributors (lighting) and manufacturers (luminaires, transformers) in information and campaigning. Retail staff can explain lighting labels to consumers
	10) Share of high-efficiency distribution transformers in production (newly added transformers)	Only a few larger companies can produce high-efficiency transformers. Performance data are not available	No target defined	90% of annually added new transformers (21,000 out of 22,500 in 2023) are high-efficient (comply with new MEPS)	Manufacturers survey (linked with market assessments, Indicator 5) <i>Assumptions/risk;</i> involvement of transformer manufacturers and willingness to upgrade their production lines <i>Assumption/risks:</i> Eskom contracts will stipulate % share of transformers using vegetable oil and municipal distributors will follow suit

	Objective and Outcome Indicators	Baseline (2017/18)	Mid-term project target (MoP, 2021)	End of Project (EoP) target (2023)	Data collection methods and risks/assumptions
	11) Number of stakeholders (companies, municipalities), trained by the Project in new requirements of MEPS, labelling programs, local production, environmental management and associated regulations; Number of staff trained per stakeholder	Zero by default	Representatives of at least 20 entities trained	Representatives of at least 40 entities trained	<p>Reports of training events (including participation numbers broken down per gender, participants' response and satisfaction questionnaires). Training materials made available. Training impact assessment analysis</p> <p><i>Assumptions/risks:</i> Strong cooperation between private and public institution on trainings and sharing experiences and lessons learnt. Some training could be directly offered by the project, while other training could be offered internally by companies, institutions, municipalities to their own employees, with the project's support.</p>
Outcome 3 Financial support programmes designed and operational					
	12) Number and amount of funding provided by EEFI and matching co-funding	Zero by default	USD 2 million provided as GEF grant matching at least USD 10 million in co-financing (loans, guarantees) by development banks, commercial banks, or other co-financing sources	USD 4 million provided as GEF grant matching at least USD 20 million in co-financing (loans, guarantees) by development banks, commercial banks, or other co-financing sources.	Reports by the financing institution or development bank concerned. Other financial indicators will be added (number of loans or grants, type of beneficiaries, the purpose of financial support) as well as technology supported (number of lamps installed number of HE transformers installed)

	Objective and Outcome Indicators	Baseline (2017/18)	Mid-term project target (MoP, 2021)	End of Project (EoP) target (2023)	Data collection methods and risks/assumptions
	13) <i>Vulnerable groups and women access loan finance to start participating in projects as shown by the number of Women-Owned Businesses benefiting and participating in the implementation of the project.</i>	Very few women participate in projects especially in the energy sector (see section in the ProDoc on gender).	Initially, an increase of (20%) of women and vulnerable groups access finance and participate in the implementation of energy efficient lighting and equipment	Increase in 50% participation of vulnerable groups including women access loans and participate meaningfully in projects achieving representation that is on par with their male counterparts.	Data is collected from the time the policy facilitating funding of WOBs is implemented. Close monitoring is ensured through surveys in order to detect any side barriers cropping up so that they are addressed promptly.
Outcome 4 Environmentally sound management and waste disposal practices	14) Completed assessments of lamp (CFL) disposal and recycling and on the potential of using vegetable oil in transformers	No integrated national-level assessment on lamp recycling. No national-level assessment of use of vegetable oil	Two assessments with policy recommendations of 1) lamp recycling and mercury recovery; 2) use of vegetable oil in transformers	Idem.	Assessment study reports Assumption/risks: Retailers, municipalities recycling companies as well as distribution manufacturers are willing to cooperate in data collection and questionnaire surveys
	15) Share of domestically-produced distribution transformers using vegetable oil	Distribution transformers use mineral oil for insulation	5% of transformers use vegetable (ester) oil	20% of transformers use vegetable oil	Report by Eskom and municipalities, NERSA Assumption/risks: Eskom (and municipal) contracts will stipulate % share of transformers using vegetable oil and municipal distributors will follow suit

The Project Results Framework is provided in Section 6 of the UNDP Project Document or Section 2 of the DBSA ProDoc.,

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).

GEF Comment	Response
<p><i>Question 2</i></p> <p>4) South Africa. The child project is quite large (\$10 million) and includes a sizable investment component. Please justify the project size. Also, please clarify how the proposed project will build on the foundations of existing GEF projects in South Africa. Please also elaborate on how the investment in LED street lighting can be made sustainable and replicable. Also please clarify if this is one child project or two child projects (<i>comment cleared</i>)</p>	<p>4) South Africa – The project size is justified due to South Africa large energy consumption, the ongoing energy crisis, the commitment the government of South Africa has placed on energy issues and also the use of investments in the child project. These are described in further detail below:</p> <p>Energy efficiency gains are required for South Africa to meet its growing energy demand that is needed to continue economic development;</p> <p>Similarly, South Africa is undergoing a severe energy crisis, including electricity shortages, blackouts, and expected increases in tariffs;</p> <p>The government has committed high importance on solving this problem through demand side management programs, including energy efficiency of end-use products;</p> <p>The child project also includes investments that require large funding amounts, such as financial mechanisms and loans to utilities at low interest rates.</p> <p>The project will build on the previous GEF/UNDP project to establish standards and labels by extending the lighting scope to LEDs and distribution transformers – both of which are not included in the previous UNDP/GEF project. Expanding the scope of MEPS to LEDs is necessary in order to ensure poor performing products do not hinder consumer confidence.</p> <p>During project preparation, the project will fully consider the lessons learned and recommendations for the ongoing. Further, the proposed child project does not limit itself to standards and labels, it expands on the previous project to include financial mechanisms, market surveillance, and environmentally sound management.</p> <p>Regarding whether LED street lighting investment is sustainable and replicable, the project will implement both regulatory mechanisms offering long-term sustainability and also include financial mechanisms providing incentive for municipalities to transform their street lighting. The financial mechanisms will be replicable, as they will show municipalities that they can reduce costs over the lifetime of the product by implementing LED lamps, providing increased confidence of private sector companies and financial institutions to invest in such investments. The project will also integrate a public and private ESCO, which would be sustainable beyond project completion. The project will make specific linkages with India's Energy Efficiency Services Limited (EESL) in order to implement a similar ESCO in South Africa.</p>

<p>4) Large size project in South Africa is defended in the response, however, the justification is not clear. Specifically, the UNDP project 2692, "Market Transformation through Energy Efficiency Standards and Labeling of Appliances" is currently under implementation. The ratings to date have not been good and the mid-term review has not been completed. Before proceeding with a new project in this area, managed in part by UNDP, additional justification will be required.</p>	<p>4) This new South Africa Child project on LED lighting and distribution transformers will overcome barriers encountered by the on-going UNDP project due to the following aspects: Involvement of DBSA will allow for accelerated and greater commitment of government officials and local stakeholders (including industry) in South Africa to achieve the project's objectives due to DBSA strong local presence. The child project will engage with local stakeholders at project preparation in order to ensure all issues are understood and that stakeholders are properly informed on the project. Further, the global program will also facilitate in overcoming the barriers by providing best practice policy and project resources (guides, webinars, etc) to support sound knowledge management in South Africa. The global program will support the project with training of government officials to ensure that the best practice recommendations are implemented in South Africa. Lastly, the energy crisis in South Africa has resulted in very strong political commitment for energy efficiency projects from the national government, local industry and the general consumers, which are all negatively impacted by the current situation through increased electricity tariffs and frequent blackouts. Due to this local motivation, the project will be implemented at an accelerated speed and greater force.</p>
<p><i>Question 11.</i> Please address the following comment: a) With DBSA designated to receive \$5,559,000 for its portion of the child project in South Africa, please confirm that as a newly accredited agency, DBSA has sufficient cap remaining in its per project grant and total grant ceilings to manage this project. b) Please confirm if the South Africa is two child projects as noted in the PFD Annex A or one child project with join implementation as noted in the child project concept note. <i>(comment cleared)</i></p>	<p>a) This is within DBSA cap and total grant ceiling. Please refer to the DBSA Project Agency Certification Template annexed. b) The South Africa project should be one child project with joint implementation. This has been corrected in Annex A of the PFD.</p>

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

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

PPG Grant Approved at PIF: 200,000			
Project Preparation Activities Implemented	GETF/LDCF/SCCF/CBIT Amount (\$)		
	Budgeted Amount	Amount Spent To date	Amount Committed
Technical assistance (design technical elements as well as all the required financial and administrative components of the project) Conducting missions to the project sites	190,000	135,762	54,238
Stakeholder consultation and validation workshop	10,000	2,968	7,032
Total	200,000	138,730	61,270

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

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

N/A

ANNEX E: GEF 7 Core Indicator Worksheet

Use this Worksheet to compute those indicator values as required in Part I, Table G to the extent applicable to your proposed project. Progress in programming against these targets for the program will be aggregated and reported at any time during the replenishment period. There is no need to complete this table for climate adaptation projects financed solely through LDCF and SCCF.

Core indicator 6: Greenhouse gas emissions mitigated

GHG emission type	Metric tons CO ₂ -eq (expected at PIF)	Metric tons CO ₂ -eq (expected at CEO ER)	Metric tons CO ₂ -eq (expected at MTR)	Metric tons CO ₂ -eq (expected at TE)
Lifetime direct project GHG emissions mitigated	58.3 million (over 2020-2030) See Box 48	15.23 million (over 2019-2022)		
Lifetime direct post-project emissions mitigated		--		
Lifetime indirect GHG emissions mitigated		35.18 million (over 2023-2030)		

Box 48 Potential energy savings and avoided emissions in South Africa in 2030

Equipment/Appliance Type	Energy savings (GWh/yr)	Avoided CO ₂ emissions (thousand tonnes/yr)	Cumulative CO ₂ emissions reductions, 2020-2030 (million tonnes)
Lighting	10,448	10,365	89.6
Distribution transformers	5,109	4,604	27.0
TOTAL	15,557	14,969	116.6

Under the umbrella of the global project “Leapfrogging markets to high efficiency products (appliances, including lighting, and electrical equipment”, no official PIF was formulated for the South Africa ‘child’ project. Instead a ‘child concept note’ was formulated that does not give an estimate of the direct project and indirect lifetime GHG emission reduction, except for mentioning annual GHG reduction in the year 2030 of about 17 million tCO₂ approximately. This rough estimate itself is based on calculations (based on minimum energy performance standards assumptions consistent with current world best practices: “best MEPS”) presented in the U4E United for Efficiency *South Africa Country Assessment* (for assumptions and data sources, see <http://united4efficiency.org/countries/country-assessments/> (see table). As these calculations do give a cumulative GHG emission reduction, the figure from the Country Assessment is used (multiplied by a *compliance factor of 50%*) as the value for ‘Core Indicator 6’ at PIF stage. The PIF value of 58.3 million tCO₂ over 2020-2030) compares with the lifetime direct + indirect CO₂ emission reduction at CEO ER stage of 50.41 million tCO₂.

Core indicator 11: Number of direct beneficiaries (individuals) disaggregated by gender (GEF and co-financing)

	Total number (expected at PIF)	Total number (expected at CEO ER)	Total number (achieved at MTR)	Total number (achieved at TE)
Women	--	3.8 million		
Men	--	3.8 million		
Total	--	7.6 million		

ANNEX: Project Taxonomy Worksheet

Use this Worksheet to list down the taxonomic information required under Part1 by ticking the most relevant keywords/topics//themes that best describes the project

Level 1	Level 2	Level 3	Level 4
Influencing models			
	Transform policy and regulatory environments		
	Strengthen institutional capacity and decision-making		
	Convene multi-stakeholder alliances		
	Demonstrate innovative approaches		
	Deploy innovative financial instruments		
Stakeholders			
	Indigenous Peoples		
	Private Sector		
		Capital providers	
		Financial intermediaries and market facilitators	
		Large corporations	
		SMEs	
		Individuals/Entrepreneurs	
		Non-Grant Pilot	

		Project Reflow	
	Beneficiaries		
	Local Communities		
	Civil Society		
		Community Based Organization	
		Non-Governmental Organization	
		Academia	
		Trade Unions and Workers Unions	
	Type of Engagement		
		Information Dissemination	
		Partnership	
		Consultation	
		Participation	
	Communications		
		Awareness Raising	
		Education	
		Public Campaigns	
		Behavior Change	
Capacity, Knowledge and Research			
	Enabling Activities		
	Capacity Development		
	Knowledge Generation and Exchange		
	Targeted Research		
	Learning		
		Theory of Change	
		Adaptive Management	
		Indicators to Measure Change	
	Innovation		
	Knowledge and Learning		
		Knowledge Management	
		Innovation	
		Capacity Development	

		Learning	
	Stakeholder Engagement Plan		
Gender Equality			
	Gender Mainstreaming		
		Beneficiaries	
		Women groups	
		Sex-disaggregated indicators	
		Gender-sensitive indicators	
	Gender results areas		
		Access and control over natural resources	
		Participation and leadership	
		Access to benefits and services	
		Capacity development	
		Awareness raising	
		Knowledge generation	
Focal Areas/Theme			
	Integrated Programs		
		Commodity Supply Chains ([1]Good Growth Partnership)	
			Sustainable Commodities Production
			Deforestation-free Sourcing
			Financial Screening Tools
			High Conservation Value Forests
			High Carbon Stocks Forests
			Soybean Supply Chain
			Oil Palm Supply Chain
			Beef Supply Chain
			Smallholder Farmers
			Adaptive Management
		Food Security in Sub-Sahara Africa	
			Resilience (climate and shocks)
			Sustainable Production Systems
			Agroecosystems
			Land and Soil Health

			Diversified Farming
			Integrated Land and Water Management
			Smallholder Farming
			Small and Medium Enterprises
			Crop Genetic Diversity
			Food Value Chains
			Gender Dimensions
			Multi-stakeholder Platforms
		Food Systems, Land Use and Restoration	
			Sustainable Food Systems
			Landscape Restoration
			Sustainable Commodity Production
			Comprehensive Land Use Planning
			Integrated Landscapes
			Food Value Chains
			Deforestation-free Sourcing
			Smallholder Farmers
		Sustainable Cities	
			Integrated urban planning
			Urban sustainability framework
			Transport and Mobility
			Buildings
			Municipal waste management
			Green space
			Urban Biodiversity
			Urban Food Systems
			Energy efficiency
			Municipal Financing
			Global Platform for Sustainable Cities
			Urban Resilience
	Biodiversity		
		Protected Areas and Landscapes	
			Terrestrial Protected Areas
			Coastal and Marine Protected Areas

			Productive Landscapes
			Productive Seascapes
			Community Based Natural Resource Management
		Mainstreaming	
			Extractive Industries (oil, gas, mining)
			Forestry (Including HCVF and REDD+)
			Tourism
			Agriculture & agrobiodiversity
			Fisheries
			Infrastructure
			Certification (National Standards)
			Certification (International Standards)
		Species	
			Illegal Wildlife Trade
			Threatened Species
			Wildlife for Sustainable Development
			Crop Wild Relatives
			Plant Genetic Resources
			Animal Genetic Resources
			Livestock Wild Relatives
			Invasive Alien Species (IAS)
		Biomes	
			Mangroves
			Coral Reefs
			Sea Grasses
			Wetlands
			Rivers
			Lakes
			Tropical Rain Forests
			Tropical Dry Forests
			Temperate Forests
			Grasslands
			Paramo
			Desert

		Financial and Accounting	
			Payment for Ecosystem Services
			Natural Capital Assessment and Accounting
			Conservation Trust Funds
			Conservation Finance
		Supplementary Protocol to the CBD	
			Biosafety
			Access to Genetic Resources Benefit Sharing
	Forests		
		Forest and Landscape Restoration	
			REDD/REDD+
		Forest	
			Amazon
			Congo
			Drylands
	Land Degradation		
		Sustainable Land Management	
			Restoration and Rehabilitation of Degraded Lands
			Ecosystem Approach
			Integrated and Cross-sectoral approach
			Community-Based NRM
			Sustainable Livelihoods
			Income Generating Activities
			Sustainable Agriculture
			Sustainable Pasture Management
			Sustainable Forest/Woodland Management
			Improved Soil and Water Management Techniques
			Sustainable Fire Management
			Drought Mitigation/Early Warning
		Land Degradation Neutrality	
			Land Productivity

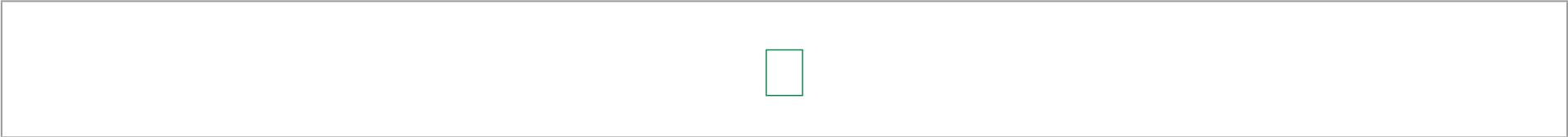
			Land Cover and Land cover change
			Carbon stocks above or below ground
		Food Security	
	International Waters		
		Ship	
		Coastal	
		Freshwater	
			Aquifer
			River Basin
			Lake Basin
		Learning	
		Fisheries	
		Persistent toxic substances	
		SIDS : Small Island Dev States	
		Targeted Research	
		Pollution	
			Persistent toxic substances
			Plastics
			Nutrient pollution from all sectors except wastewater
			Nutrient pollution from Wastewater
		Transboundary Diagnostic Analysis and Strategic Action Plan preparation	
		Strategic Action Plan Implementation	
		Areas Beyond National Jurisdiction	
		Large Marine Ecosystems	
		Private Sector	
		Aquaculture	
		Marine Protected Area	
		Biomes	
			Mangrove
			Coral Reefs
			Seagrasses
			Polar Ecosystems

			Constructed Wetlands
	Chemicals and Waste		
		Mercury	
		Artisanal and Scale Gold Mining	
		Coal Fired Power Plants	
		Coal Fired Industrial Boilers	
		Cement	
		Non-Ferrous Metals Production	
		Ozone	
		Persistent Organic Pollutants	
		Unintentional Persistent Organic Pollutants	
		Sound Management of chemicals and Waste	
		Waste Management	
			Hazardous Waste Management
			Industrial Waste
			e-Waste
		Emissions	
		Disposal	
		New Persistent Organic Pollutants	
		Polychlorinated Biphenyls	
		Plastics	
		Eco-Efficiency	
		Pesticides	
		DDT - Vector Management	
		DDT - Other	
		Industrial Emissions	
		Open Burning	
		Best Available Technology / Best Environmental Practices	
		Green Chemistry	
	Climate Change		
		Climate Change Adaptation	
			Climate Finance
			Least Developed Countries

			Small Island Developing States
			Disaster Risk Management
			Sea-level rise
			Climate Resilience
			Climate information
			Ecosystem-based Adaptation
			Adaptation Tech Transfer
			National Adaptation Programme of Action
			National Adaptation Plan
			Mainstreaming Adaptation
			Private Sector
			Innovation
			Complementarity
			Community-based Adaptation
			Livelihoods
		Climate Change Mitigation	
			Agriculture, Forestry, and other Land Use
			Energy Efficiency
			Sustainable Urban Systems and Transport
			Technology Transfer
			Renewable Energy
			Financing
			Enabling Activities
		Technology Transfer	
			Poznan Strategic Programme on Technology Transfer
			Climate Technology Centre & Network (CTCN)
			Endogenous technology
			Technology Needs Assessment
			Adaptation Tech Transfer
		United Nations Framework on Climate Change	
			Nationally Determined Contribution
			Paris Agreement
			Sustainable Development Goals

		Climate Finance (Rio Markers)	Climate Change Mitigation 1 Climate Change Mitigation 2 Climate Change Adaptation 1 Climate Change Adaptation 2
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[1]



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