

# GEF-7 Africa Minigrids Program

**Review PIF and Make a recommendation**

## Basic project information

**GEF ID**

10413

**Countries**

Regional (Angola, Burkina Faso, Comoros, Djibouti, Eswatini, Ethiopia, Madagascar, Malawi, Nigeria, Somalia, Sudan)

**Project Name**

GEF-7 Africa Minigrids Program

**Agenices**

UNDP, AfDB

**Date received by PM**

10/15/2019

**Review completed by PM**

**Program Manager**

Filippo Berardi

**Focal Area**

Climate Change

**Project Type**

PFD

## PIF

### Part I – Project Information

#### Focal area elements

1. Is the project/program aligned with the relevant GEF focal area elements in Table A, as defined by the GEF 7 Programming Directions?

#### Secretariat Comment at PIF/Work Program Inclusion

11/01/2019, FB:

This item is cleared.

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#### 10/24/2019: please address the following comments

The Program is well aligned with the GEF CCM focal area elements as per the GEF7 programming directions, in particular with CCM-1-1. However, the following aspects need revising:

1. Program Commitment Deadline is in 24 months, which exceeds the required 18-month deadline as per our GEF Project Cycle Policy. Correct date should be 19

Duration	Agency Fee(\$)	Program Commitment Deadline	Submission Date
48 In Months	2,214,394	12/31/2021	10/11/2019

June 2021 at the latest.

2. "Other Executing Partners": It is understood that UNDP will only act as executing entity for the Regional Child Project. Therefore, we suggest removing UNDP from this field to avoid confusion, and just leave RMI as EE. Please also update the corresponding "Executing Partner Type".

### Agency Response

10/31/19

We have revised the program commitment deadline to 19 June 2021.

We have also removed references to UNDP as an executing partner under the program, except for the regional child project.

### Indicative project/program description summary

2. Are the components in Table B and as described in the PIF sound, appropriate, and sufficiently clear to achieve the project/program objectives and the core indicators?

### Secretariat Comment at PIF/Work Program Inclusion

11/06/2019, FB:

This item is cleared.

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11/05/2019, FB:

- On Nigeria being listed twice, thank you for your answer. I am asking internally with the colleagues in charge of the portal.

- An additional point, In Project Information, the option “Other program” indicated ‘No’, which is incorrect (see screenshot below). It should be ‘Yes’.

<b>Impact Program</b>	<b>IP-Sustainable</b>	<b>IP-Sustainable</b>	<b>IP-Sustainable</b>	<b>IP-Sustainable</b>	<b>Other Program</b>
IP-Food-Land- Restoration	Cities	Forest Management Amazon	Forest Management Congo	Forest Management Drylands	<b>No</b>
<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	

11/04/2019, FB:

- Nigeria is included twice in Part I. Please delete repeated entry.

<b>Type of Trust Fund</b> GET	<b>CBIT/NGI</b> <input type="checkbox"/> CBIT <input type="checkbox"/> NGI	<b>Program Title</b> GEF-7 Africa Minig
<b>Countries</b> Regional, Angola, Burkina Faso, Comoros, Djibouti, Eswatini, Ethiopia, Madagascar, Malawi, <b>Nigeria</b> , Somalia, <b>Nigeria</b> , Sudan		<b>Agency(ies)</b> UNDP, AfDB

2. All other comments are cleared.

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11/01/2019, FB:

All previous comments have been addressed. As a follow up please:

- include Djibuti EE in Part I of the PFD, throughout tables A to D. Please remove the last line of the footnote to table B, which excludes Djibuti's EE component. CCM-1-3 will need to be included in the program as the relative funding needs to be approved by Council. OK
- consider removing the last sentence of the footnote to table C on co-financing, regarding drop down menus options, unless it is still accurate. OK

10/24/2019: please address the following comments

Yes, the components described in Table B are considered well positioned to achieve the stated program objectives.

- Component 2.1. is listed twice. Please revise the numbering of the outcomes/activities within component 2.
- Component 3.1 is listed twice too. Please revise.
- Description of the participation of Angola and Madagascar (e.g. in "justification text" after the PMC section and in the justification of "investment mobilized": more details on why Angola and Madagascar are listed with no GEF resources would be appropriate. In particular, this may refer to the fact that the countries expressed interest in participating to the program level activities, and to benefit from those, even though they were facing unavailability of CCM resources. New and additional resources were provided by participating organizations for the national activities, to complement the regional activities funded by the GEF CCM set-aside. It would be also useful to mention how the two countries will benefit from participation to the program, and that they will contribute to the program's results and impacts.
- Component 2 - Investment: it is not clear how the budget for capital investments will be used. More details are needed.
- Components 3.4 and 3.5: please add a couple of lines in the components description to explain how the private sector developers which will receive the support (pre or post bidding) will be selected to ensure fairness and transparency.

### **Agency Response**

11/06/2019: Thank you. Other program now indicates "yes".

11/05/2019:

Thank you for pointing this out. From the UNDP side, we had only entered Nigeria once in the list of participating countries in the portal. However, in the final version, Nigeria does indeed appear twice. As this appears to be a technical issue with the portal, would your IT colleagues at the GEF Secretariat be able to advise on this?

+ Add Other Agency

\*  Global  Regional  Country

Angola × Burkina Faso × Comoros × Djibouti ×  
Eswatini × Ethiopia × Madagascar × Malawi ×  
Nigeria × Somalia × Sudan ×

11/04/2019:

We have now included the Djibouti EE component in Tables A to D and in Annex A. We have included a brief reference to this in the footnote to Table B.

As suggested, we have removed the last sentence of the footnote to table C on co-financing, regarding drop down menu options.

10/31/19

We have revised the component and output numbering throughout in Table B to clarify this numbering issue.

We have inserted a note in the justification texts after Table B and C providing more details on Angola and Madagascar's inclusion.

On the comment on Component 2 – Investment: specific GEF-funded capital investments will be defined during the PPG stage when national child project documents are developed. However, in general, GEF-funded capital investment, alongside other co-financing, will be used in a targeted fashion to maximize cost reduction impact. For example, GEF-funded investment could be used for minigridded cost-reduction activities such as piloting hardware standardization and modularization, and productive-use and innovative appliances business models, addressing hardware costs. As per GEF SEC's later comment, in all cases, GEF-funded capital investment will only address incremental costs, and not business-as-usual investment which would have occurred in the baseline.

The following changes have been made.

- Edited the wording on output 2.1 in Table B to make this output clearer
- Added additional descriptive text in Section 3.2 (program design and components) addressing these issues.

On the comment on Components 3.4 and 3.5: As this comment refers to private sector developers pre and post bidding, we think this comment may actually refer to outputs 2.3 and 2.4. Principles of competitive selection according to transparent criteria, and in line with public procurement principles, will be used to select private sector developers to participate in these activities. In addition, to maximize relevant participation, selection of private sector developers will be aligned as relevant with existing criteria and selection of private sector developers in national tenders. Additional descriptive text on this has now been added in Section 3.2 (program design and components).

<!-- /\* Font Definitions \*/ @font-face {font-family:"Cambria Math"; panose-1:2 4 5 3 5 4 6 3 2 4;} @font-face {font-family:Calibri; panose-1:2 15 5 2 2 2 4 3 2 4;} @font-face {font-family:"Segoe UI"; panose-1:2 11 5 2 4 2 4 2 2 3;} /\* Style Definitions \*/ p.MsoNormal, li.MsoNormal, div.MsoNormal {margin-top:0in; margin-right:0in; margin-bottom:8.0pt; margin-left:0in; line-height:107%; font-size:11.0pt; font-family:"Calibri",sans-serif;} .MsoChpDefault {font-family:"Calibri",sans-serif;} .MsoPapDefault {margin-bottom:8.0pt; line-height:107%;} /\* Page Definitions \*/ @page WordSection1 {size:8.5in 11.0in; margin:1.0in 1.0in 1.0in 1.0in;} div.WordSection1 {page:WordSection1;} -->

### **Co-financing**

**3. Are the indicative expected amounts, sources and types of co-financing adequately documented and consistent with the requirements of the Co-Financing Policy and Guidelines, with a description on how the breakdown of co-financing was identified and meets the definition of investment mobilized?**

### **Secretariat Comment at PIF/Work Program Inclusion**

11/04/2019, FB:

This item is cleared.

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11/01/2019, FB:

All previous comments have been addressed. As a follow up please:

- In the co-financing table: There is a contribution from Somalia's Min of Energy and Water which is listed as "in-kind", but is also marked as Investment Mobilized (3.5M). Typically investment mobilized would not be in-kind, and conversely, typically in-kind would be recurrent expenditures. Please revise or provide justification.

10/24/2019: please address the following comments

- Please provide a breakdown of co-financing by entity. For example, in the PFD-table there are currently no in-kind / recurrent expenditures by Recipient Country Governments, while at the same time WB loans/grants are included in the investment mobilized for each country. For each country, the expected co-financing should respect the items included in the Child Projects.

- Please use the following format in the Name of Co-financier" field: "Name of Country\_Name of Institution providing co-Financing". Then select the correct type of co-financing. The "Investment Mobilized" column should be filled in line with the guidance provided in the co-financing guidelines: [http://www.thegef.org/sites/default/files/documents/Cofinancing\\_Guidelines.pdf](http://www.thegef.org/sites/default/files/documents/Cofinancing_Guidelines.pdf)

- The SEFA co-financing is split in two tranches. Is there a reason? If not, please consolidate it:

GEF Agency	Sustainable Energy Fund for Africa	Grant	Investment mobilized	11,000,000
GEF Agency	Sustainable Energy Fund for Africa	Grant	Investment mobilized	25,000,000
GEF Agency	UNDP	Grant	Investment mobilized	1,000,000

- Also, in table C please add the name of the "GEF Agency" as appropriate in name of the cofinancier field (e.g. AfDB-SEFA).

## Agency Response

11/04/2019:

Thank you for pointing this out. We have updated the nature of the in-kind co-financing from the Somalia Ministry of Energy and Water Resources to recurrent expenditures.

10/31/19

We have provided a detailed breakdown of national child project co-financing following the suggested format.

We have split the SEFA co-financing in two tranches as SEFA will be providing both grant-based TA support as well as results-based financing in the form of concessional loans.

We have now added the name of the GEF Agency in the co-financier field.

#### **GEF Resource Availability**

**4. Is the proposed GEF financing in Table D (including the Agency fee) in line with GEF policies and guidelines? Are they within the resources available from (mark all that apply):**

#### **Secretariat Comment at PIF/Work Program Inclusion**

11/05/2019, FB:

This item is cleared.

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11/04/2019, FB:

- Table D: project amounts for 3 of the countries appear to be lower than in the LOEs (Ethiopia, Sudan and Somalia). Please revise to bring in line with the signed LOEs. OK

- Annex A format now displays correctly. However:

----- the numbers are not consistent with what reported in Part I of the PFD, including in Table D. Project amount for some countries is different from table D (e.g. Sudan). OK

----- GEFTF and Co-financing resources are summed up together under a column labelled GEF project financing. This is confusing as it makes it difficult to check for consistency with what's reported above. Suggest separating the columns. OK

- All other previous comments are addressed.

11/01/2019, FB:

- Djibouti: the modifications made to the Djibouti child project and the explanation provided are accepted. The nexus between CCM-1-1 and CCM-1-3 is well explained and reasonable, so the comment is considered addressed. Please reflect this change adequately in the financial elements of the PFD, as the CCM-1-3 amount will need to be listed in the relevant tables of Part I. OK

- Somalia:

--- please remove mention of the sustainable biomass component from footnote #4 of the Regional Child Project Concept Note. OK

--- in the child concept note, there is still some mention of the LD STAR Allocation in Table D and in the PPG section, and mention of cookstoves in the table listing outcomes. Please modify accordingly. OK

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

GEF Agency	Trust Fund	Country/ Regional/ Global	Focal Area	Programming of Funds	(in \$)		
					GEF Project Financing (a)	Agency Fee (b)	Total (c)=a+b
UNDP	GEFTF	Somalia	Climate change	CC STAR Allocation	1,484,247	133,582	1,617,829
UNDP	GEFTF	Somalia	Climate change	BD STAR Allocation	1,776,484	159,884	1,936,368

Child Project Concept March 17, 2019

<b>Total GEF Resources</b>	<b>3,260,731</b>	<b>293,466</b>	<b>3,554,197</b>
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**PROJECT PREPARATION GRANT (PPG)**

Is Project Preparation Grant requested?

- Yes  If yes, PPG funds have to be requested via the Portal once the PFD is approved  
 No  If no, skip this item.

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

GEF Agency	Trust Fund	Country/ Regional/Global	Focal Area	Programming of Funds	(in \$)		
					PPG (a)	Agency Fee (b)	Total c = a + b
UNDP	GEFTF	Somalia	Climate change	CC STAR Allocation	50,000	4,500	54,500
UNDP	GEFTF	Somalia	Climate change	BD STAR Allocation	50,000	4,500	54,500
<b>Total PPG Amount</b>					<b>100,000</b>	<b>9,000</b>	<b>109,000</b>

	Objective and Outcome Indicators
<p><b>Project Objective:</b></p> <p><i>Supporting access to clean energy by increasing the financial viability and promoting scaled-up commercial investment in minigrids and sustainable production of charcoal and its efficient use in Somalia.</i></p>	<p><u>Mandatory Indicator 1:</u> Number of households benefitting from clean, affordable and sustainable energy access (project will target rural households only)</p> <p><u>Mandatory Indicator 2</u> (Lifetime direct project GHG emissions mitigated): <i>Direct project CO<sub>2</sub> emission reductions, metric tCO<sub>2</sub>e.</i></p> <p><u>Mandatory indicator 3:</u> # of direct beneficiaries disaggregated by gender.</p>
<p><b>Outcome<sup>87</sup> 1</b></p> <p><i>Appropriate policies and regulations are in place that address policy, institutional, regulatory and technical barriers to facilitate investment in solar PV-battery minigrids and efficient charcoal &amp; firewood and solar cookstoves</i></p>	<p><u>Indicator 4:</u> Number of DREI analyses and geospatial modelling of least-cost off-grid electrification options</p> <p><u>Indicator 5:</u> Number of domesticated quality standards</p>
<p><b>Outcome 2</b></p> <p><i>Innovative business models based on cost reduction operationalized to support and strengthen private participation in solar PV-battery minigrid development</i></p>	<p><u>Indicator 6:</u> Number of solar-hybrid minigrids developed (by installed capacity and region)</p> <p><u>Indicator 7:</u> Number of organizations with enhanced technical capacity to develop procurement processes or bids for minigrids with focus on cost reduction</p>
<p><b>Outcome 3</b></p> <p><i>An innovative financing mechanism and accompanying financial instruments in place to incentivize investments in the development of solar PV-battery minigrids</i></p>	<p><u>Indicator 8:</u> Number of financing schemes for minigrids developed and operationalised</p>
<p><b>Outcome 4</b></p> <p><i>Increased awareness and network opportunities in the sustainable energy markets and among stakeholders, and lessons learned for scaling up rural electrification using solar PV-battery minigrids and sustainable production and use of renewable biomass</i></p>	<p><u>Indicator 9:</u> Number of knowledge networks created</p> <p><u>Indicator 10:</u> Number of replication plans, including detailed budgets, for scaling up the deployment of sustainable minigrids and cooking technologies in Somalia (based on annual lessons learned)</p>

Project Core Indicators		Expected at PIF
6	Greenhouse Gas Emissions Mitigated (metric tons of CO <sub>2</sub> e)	45,400 (direct for minigrids only) 1,070,000 (consequential top down for minigrids only)
11	Number of direct beneficiaries disaggregated by gender as co-benefit of	183,168 (of which 50%

- Annex A of the PFD: the format still appear to be misaligned. Please see let us know if the problem is related to the portal, and i will ask my colleagues for a solution.

## ANNEX A: LIST OF CHILD PROJECTS UNDER THE PROGRAM

a/ Total amount of child project concepts should equal the GEF programme financing requested and consistent with Tables A, B and D.

Country	Project Title	GEF Agency	Type of Trust Fund	GEF project financing (\$)	Agency fee (\$)	Total (\$)
<b>Full-sized projects</b>						
Regional	GEF-7 Africa Minigrids Program	UNDP	GEF TF	3,000,900	270,081	2,270,981
Djibouti	GEF-7 Africa Minigrids Program	UNDP	GEF TF	2,193,347	197,401	2,390,748
Ethiopia	GEF-7 Africa Minigrids Program	UNDP	GEF TF	2,877,169		258,945,136,114
Nigeria	GEF-7 Africa Minigrids Program	UNDP	GEF TF	5,905,046	581,454	6,486,500
Somalia	GEF-7 Africa Minigrids Program	UNDP	GEF TF	3,260,731		293,466,554,197
Sudan	GEF-7 Africa Minigrids Program	UNDP	GEF TF	3,096,347		278,673,375,018
	<b>Subtotal</b>			<b>20,333,540</b>	<b>1,830,018</b>	<b>21,163,558</b>
<b>Medium-sized projects</b>						
Angola	GEF-7 Africa Minigrids Program	AfDB	AfDB - SEFA	1,000,000	-	1,000,000
Burkina Faso	GEF-7 Africa Minigrids Program	UNDP	GEF TF	924,566		83,211,007,777
Burkina Faso	GEF-7 Africa Minigrids Program	UNDP	UNDP TRAC	1,000,000	-	1,000,000
Comoros	GEF-7 Africa Minigrids Program	UNDP	GEF TF	1,269,863		114,288,384,151
Eswatini	GEF-7 Africa Minigrids Program	UNDP	GEF TF	863,242		77,692,940,934
Madagascar	GEF-7 Africa Minigrids Program	UNDP	UNDP TRAC	1,000,000	-	1,000,000

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10/24/2019: please address the following comments

Yes, the proposed CCM GEF financing in Table D is in line with GEF policies and it is within the available resources from CCM STAR. In particular, the program is aligned with CCM-1-1, which is correctly listed in Table A.

However, we note that for two of the Child Projects include components that are not related to CCM-1-1:

Djibouti includes a CCM-1-3 amount. The proposed use of CCM resources for energy efficiency in building, and in particular focusing on the construction side (bricks and demonstration of efficient houses), and not on efficient appliances for minigrid users, do not appear to be aligned with the program's objectives.

Somalia includes an LD amount (in addition to the BD requested as marginal adjustment, which would be acceptable if it was moved to CCM). The LD amount is not in line with the program objectives, which relate to cost reductions from minigrids. Sustainable cookstoves and biomass production do not fit within the program scope.

None of the non-CCM-1-1 amounts appear to be justifiable considering the stated objectives and theory of change of the program. As such, they were not included in Table A, and as such they should be removed from the program and from the relative Child Projects.

Nevertheless, interested countries, can make use of the marginal adjustment allowance, if remaining, to transfer resources from LD or BD to CCM-1-1 for this project. Likewise, the CCM resources currently earmarked for energy efficiency in Djibouti would be eligible under this program if aligned with the minigrids' development objectives (under CCM-1-1).

Format/Alignment of ANNEX A: please note that the table included under annex A has an issue of format and there appears to be mis-alignment between the columns. Please revise and correct the formatting.

## **Agency Response**

11/05/2019:

GEF financing should now be consistent across the LOEs, child project concept notes and the relevant budget tables in the PFD, notably Tables A, B, D and Annex A. For Sudan, please note that we had to reduce the GEF project amount from \$3,096,347 to \$2,637,247 based on the availability of GEF-7 STAR funding.

As recommended, we have now separated the GEF financing and Agency self-financing in Annex A.

11/04/2019:

The GEF financing for the Djibouti EE component has now been incorporated in Tables A to D and in Annex A. We have also added a reference to CCM-1-3 in the section on Alignment with GEF Focal Area.

Somalia: we have removed the reference to the sustainable biomass component from footnote #4 of the Regional Child Project Concept Note.

We have removed the BD STAR allocation from Table D and in the PPG section. We have also removed all references to sustainable biomass and cookstoves from the results framework.

We have looked into the formatting for Annex A, however we believe this may be a technology issue with uploading to the Portal. Please let us know if this is now resolved.

10/31/19

We have revised the Djibouti concept note so that the energy efficiency related activities are more fully integrated with mini-grids, and better aligned with CCM-1-1 and the program's objective. Please see the various changes made.

We have also revised the Somalia concept note by removing the LD funding and the component and activities related to sustainable cookstoves and biomass production. We are also requesting a new LoE to reflect this.

The format of Annex A has been adjusted.

**The STAR allocation?**

**Secretariat Comment at PIF/Work Program Inclusion**

OK.

**Agency Response**

The focal area allocation?

**Secretariat Comment at PIF/Work Program Inclusion**

OK.

**Agency Response**

The LDCF under the principle of equitable access

**Secretariat Comment at PIF/Work Program Inclusion**

n/a

**Agency Response**

The SCCF (Adaptation or Technology Transfer)?

**Secretariat Comment at PIF/Work Program Inclusion**

n/a

**Agency Response**

Focal area set-aside?

**Secretariat Comment at PIF/Work Program Inclusion**

OK.

**Agency Response**

Impact Program Incentive?

**Secretariat Comment at PIF/Work Program Inclusion**

n/a

**Agency Response**

Project Preparation Grant

5. Is PPG requested in Table E within the allowable cap? Has an exception (e.g. for regional projects) been sufficiently substantiated? (not applicable to PFD)

**Secretariat Comment at PIF/Work Program Inclusion**

n/a

**Agency Response**

Core indicators

**6. Are the identified core indicators in Table F calculated using the methodology included in the correspondent Guidelines? (GEF/C.54/11/Rev.01)**

**Secretariat Comment at PIF/Work Program Inclusion**

11/01/2019, FB:

**This item is cleared.**

Answers are well received.

10/24/2019: please address the following comments

The PFD is missing the estimate for sub-indicator *6.4 Increase in Installed Renewable Energy Capacity per Technology*, which is included in each child project's concept for solar

**Agency Response**

10/31/19

The estimate for sub-indicator *6.4 Increase in Installed Renewable Energy Capacity per Technology* has now been added to the core indicators table. We have calculated this on both a direct and consequential/indirect basis. The figure for a direct basis is 4.5 MW of installed capacity as a direct result of this program. The figure for a consequential/indirect basis is 1.2 GW, using the top-down methodology described in Section 6 (global environmental benefits).

We have inserted the direct figure of 4.5MW as the program's contribution to GEF 7 core indicators, where there is only one input cell. We have included new text on *both* the direct figure (4.5MW) and indirect figure (1.2GW) in Section 6.

**Project/Program taxonomy**

**7. Is the project/ program properly tagged with the appropriate keywords as requested in Table G?**

**Secretariat Comment at PIF/Work Program Inclusion**

11/01/2019, FB:

This item is cleared.

A taxonomy was provided.

**Agency Response**

**Part II – Project Justification**

**1. Has the project/program described the global environmental / adaptation problems, including the root causes and barriers that need to be addressed?**

**Secretariat Comment at PIF/Work Program Inclusion**

11/01/2019, FB:

**This item is cleared.**

All comments are adequately addressed.

10/24/2019: please address the following comments

- The program justification would benefit from including the issue of standardization of the hardware/equipment/technology used around a few tested and successful technology options, similarly from what we have seen in the solar home systems market (which has not happened yet in the minigrid market). Standardization of components should be more explicitly mentioned as a project objective.

- In 1a.(1): it would be helpful to add mention of how the 840M people can be segmented between those to be served by grid expansion, minigrids and solar home systems. Please add a brief para in the section marked with red cross in the snapshot below.

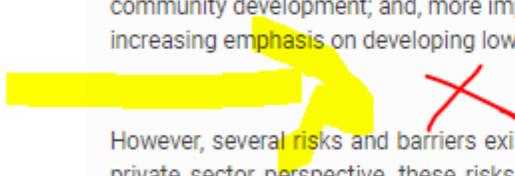
1) Global environmental and/or adaptation problems, root causes and barriers that need to be addressed

840 million people - including over half of Africans - have no access to electricity, and, as a result, no access to the improved income and savings that depend on electricity.<sup>[1]</sup> SDG7 is a fundamental enabler of the broader set of SDGs; electricity is an essential ingredient for lifting people out of poverty, improving health, boosting educational levels, reducing gender inequities, and enabling sustainable economic development.

Renewable energy minigrids ('minigrids') can now provide high-quality, low-carbon energy access, faster and in some cases cheaper than the grid. This minigrid opportunity is driven by falling hardware costs (solar modules, batteries, energy efficient appliances), disruptive digital technologies including mobile money, and innovative, private sector business models (new service offers, lowering customer acquisition costs). Just as mobile phones have eliminated the need to build costly landlines for communication, there is evidence that minigrids – with private sector involvement, could enable Africa to leapfrog traditional power systems that consist of large, polluting, and typically heavily-subsidized fossil-fuel power plants and expensive transmission lines.<sup>[2]</sup>

Unlike other off-grid energy solutions, such as most solar home systems currently on the market, minigrids have the added advantage of supporting both residential and institutional energy needs (e.g., lighting and small appliances) and productive energy uses (e.g., milling, irrigation, and light manufacturing). Minigrids can, therefore, have a positive impact on the local economy and contribute to sustainable community development; and, more importantly, they can support future energy demand growth. This realization has meant that there is an increasing emphasis on developing lower cost minigrid business models with the aim of achieving universal energy access.<sup>[3]</sup>

However, several risks and barriers exist in most countries for minigrid investment. The primary risks are summarized in Table 1. From a private sector perspective, these risks result in a higher cost of capital (equity and debt) and reduce the competitiveness of minigrids relative to alternative sources of energy (e.g., diesel generators). All else being equal, the need for higher returns that reflect these risks translates into higher energy prices that, in turn, adversely affect affordability for the end-user, or larger subsidy requirements for rural electrification programs.



## **Agency Response**

10/31/2019

Regarding standardization/modular approaches, we've made the following changes

- Reference the opportunity around modular approaches in the text on the opportunity around minigrids in the PFD section II, 1 (global environmental problems/root causes)
- As addressed in the response above, we've edited the text/description on output 2.1, on pilots, to clarify that GEF INV will include support on testing standardized/modular approaches. National child project concepts also reflect this change.
- We've created a new output 2.5 supporting upstream suppliers on standardized/modular approaches. This is also now captured in the Nigeria national child project concept.

Both these changes are reflected in Table B and Section 3.2

We have added various new descriptive text on market segmentation in section II, 1 (global environmental problems/root causes).

**2. Is the baseline scenario or any associated baseline projects appropriately described?**

## **Secretariat Comment at PIF/Work Program Inclusion**

11/04/2019, FB:

This item is cleared.

11/01/2019, FB:

All previous comments have been addressed. As a follow up please note:

- a numeric analysis of to quantify cost reduction/GEBs attributable to the program, above and beyond the evolving baseline, will be performed at PPG stage. This is acceptable and will be reflected on the items to be checked at CEO ER stage. OK
- The new sections on baseline situation re: high costs, the new ToC and the new boxes 1 and 2 are well received. It is a stronger proposal now. OK
- please check the text of the subtitle for section 2.4 ("Baseline development actor activities"): it does not reads well. OK
- please check the references/footnotes numbering, as it appears to be repeating footnote #1 several times. See picture below: OK

catalyze markets.

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[1] UNDP (2019) Project Document for UNDP-GEF project entitled "Promoting a better access to modern energy services through sustainable mini-grids and hybrid technologies in Djibouti" (PIMS 6202)

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[1] UNDP TRAC (USD 3.0m) and AfDB SEFA (USD 2.0m) funding is as follows. Please also see Annex A.

Two 'self-financed' projects in Angola (AfDB SEFA USD 1.0m) and Madagascar (AfDB SEFA (USD 1.0m), UNDP TRAC (USD 1.0m)). Co-financing to two GEF STAR projects in Malawi (UNDP TRAC (USD 1.0m) and Burkina Faso (UNDP TRAC (USD 1.0m)).

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[1] Typical soft costs include site-selection, customer acquisition, project development, ongoing operations and maintenance, and other non-hardware costs.

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[1] ESMAP. 2019. Mini Grids for Half a Billion People: Market Outlook and Handbook for Decision Makers. Executive Summary. Energy Sector Management Assistance Program (ESMAP) Technical Report 014/19. Washington, DC: World Bank.

[2] Accelerating SDG Achievement: SDG Policy Briefs in support of the High-Level Political Forum. United Nations. 2019.

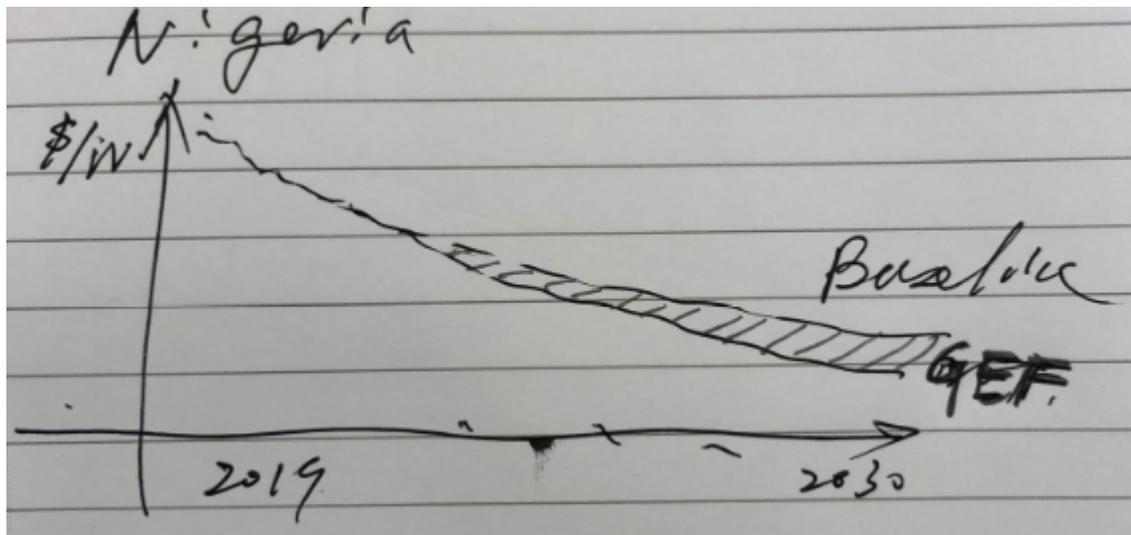
[3] More information at [www.undp.org/DREI](http://www.undp.org/DREI)

[4] GEF funded active UNDP mini-grid projects in Africa are in the following 12 countries: Benin, Central African Republic, Congo, Dem. Rep. of the Congo, Djibouti, Equatorial Guinea, Guinea-Bissau, Lesotho, Malawi, Mali, Mauritania, Sao Tome & Principe

10/24/2019: please address the following comments

- Given the focus on COST REDUCTION, the description of the problem to be solved should more explicitly include **mention of the baseline and why this is considered high cost**. This can be done comparing the current costs with other sources of electricity or with minigrad costs in other parts of the world. It can be done at aggregate level for Africa, or using examples from a selected country/(ies) to be included in the program. OK

- The development of a reference baseline should then be used to calculate when it is reasonable to expect from the GEF program in terms of alternative scenario, so that results can be attributed to the GEF program. It is ok if at this stage this is described in terms of methodology, and maybe one or two examples are given for specific countries where some initial numbers are available, and then the PFD mentions that specific baseline for existing and dynamic baseline will be developed at PPG stage. An fictional example is provided in the picture below (unit: \$/W): OK - section was revised and now includes mention of a numeric analysis of to quantify cost reduction/GEBs attributable to the program, above and beyond the baseline.



- In the sub-section "Private sector baseline activities", the PFD mentions the AfDB SEFA. It states that it was funded by Denmark, Norway and the USA. Please add the GEF, as the GEF provided \$10M for the capitalization of SEFA under the GEF6 NGI program. OK

- Description of the Carbon Trust activities: this section mentions the MiniGrid Cost Reduction Partnership within the TEA. Considering the similarities with the proposed program name, please describe the differences/niche of the GEF program vs the CT/TEA one mentioned in this section. OK

- Footnote 1 (section 3.1 of baseline description) mentions that this program may include diesel powered minigrads. Please remove this or clearly indicate that no GEF resources will fund or co-fund diesel powered solutions. OK

*Program Design:* The program has two main elements:

- A cohort of **National 'Child' Projects**, each with a set of tailored activities in line with the program's three thematic areas of (i) policy and regulations, (ii) business model innovation and private sector, and (iii) innovative finance
- A **Regional 'Child' Project**, to support the program's National Child projects, and the Africa minigrid market more generally, offering three core sets of activities: (i) knowledge tools for both public and private actors; (ii) tailored technical assistance to countries; and (iii) convening, dissemination, and tracking of progress.

The program is structured as four components, across national child projects and the regional child project, as set out in Figure 1, below. This structure allows for a clear results framework for measuring impact across national child projects, with a commonality in outcomes, outputs and indicators in each component.

[1] Under the program, renewable energy minigrids may include hybrid minigrids powered by mixed generation, including solar, battery, and diesel.

[2] Typical soft costs include site-selection, customer acquisition, project development, ongoing operations and maintenance, and other non-hardware costs.

**Figure 1. Architecture of the GEF-7 African Minigrid Program**

- "Niche" section: in addition to the language already included, it would be helpful to frame this section in terms of baseline and alternative scenario from the GEF. Given the importance of this section, and considering the crowded space for minigrids in sub Saharan Africa, it is important to stress the added value/niche of the program so this section could be given more visibility/bring brought upfront. OK

- Theory of Change: the diagram does not include the causes/problems. They should also be included as the starting point of the logic of the intervention. The focus is cost reduction, so it would be helpful to start from the root causes of the high costs and focus on those which will be directly tackled by the program. Also, the table is not really readable in the current format. So it needs to be improved. OK

- More generally, the document needs more explanation of the DREI as the key element proposed, why is it needed? how does it work? what is innovative? The concept of "cost-reduction" needs to be further unpacked and explained. OK

## Agency Response

11/04/2019:

The subtitle for section 2.4 has been revised to “Baseline activities of development partners.”

The comment regarding footnote numbering appears to be an issue with transferring the data to the portal as the footnotes are correctly numbered in the Word document. We have tried to correct for this in the resubmission.

10/31/19

Thank you for these helpful comments.

Regarding the various GEF Sec comments on (i) the baseline, (ii) the cost-reduction emphasis, and (iii) the theory of change, we’ve now made a series of edits throughout the document, listed below. Collectively we think these edits significantly improve the communication of what the program is doing in this area.

- We’ve inserted an entire new sub-section in the Part II, 2 (baseline scenario) on minigrid costs, and how today renewable energy minigrids are uncompetitive with fossil-fuel based alternatives. This text identifies key drivers of this lack of competitiveness: specifically high financing cost, and high hardware and soft costs. We include numeric analysis by UNDP illustrating this.
- We’ve reworked the section of the theory of change in Part II, 3.2 (alternative scenario) producing a new graphical representation of the theory of change, which includes the underlying risk and key drivers of higher generation costs. In this new reworked section, we also include two new boxes which illustrate UNDP and RMI’s work on cost-reduction, providing examples of each institution’s work.
- We also now link both of these two edits above to the Part II, 5, on incremental cost, clearly stating that by program addressing these cost-levers and innovative business models, it can result in a greater reduction in generation costs than in the baseline/business as usual scenario.

In the GEF Sec comments above, there is a good suggestion to perform a numeric analysis on how generation costs will fall over time, and how the program can contribute to increased reductions attributable to the GEF. We would like to propose we now perform this analysis at the PPG stage, when with more time/resources we can perform a high quality exercise. Nonetheless we think some of the other changes we've already made in this resubmission convey the qualitative aspects of this suggestion.

Regarding the sub-section "Private sector baseline activities", where AfDB SEFA is mentioned, we have added a reference to the GEF. We have also provided further detail in the Carbon Trust description.

Regarding the footnote and diesel, we have fully removed the footnote and reference to hybrid diesel minigrids (Part II, 3.1).

Regarding the text on the program's 'Niche', we've edited this up and have moved it up in Part II, 3.1 to give it more prominence and better flow in the text.

**3. Does the proposed alternative scenario describe the expected outcomes and components of the project/program?**

### **Secretariat Comment at PIF/Work Program Inclusion**

11/04/2019, FB

**This item is cleared.**

11/01/2019, FB:

All previous comments have been addressed. As a follow up please note:

-- On the question on "tailored Technical Assistance" from regional to national projects: please include a sentence stating that the modalities of the coordination between regional and national projects, including the modalities to request additional support (especially considering the limited nature of regional level TA funding for this activities) by national project, will be further developed and defined before CEO ER submission. OK

10/24/2019: please address the following comments

- The proposed alternative scenario will have to be constructed base on the required baseline analysis done, as per comments to question number 2 above. This process will also be used to justify the approach taken in terms of "incremental cost" reasoning. OK - as noted in comment above.

- Component 4: please add brief explanation on how national project can receive "tailored Technical Assistance". Briefly explain what is the process envisaged to access such resources? OK

- Figure 2 should include as result the private sector investment/mobilization. That is the key outcome/success of this program. OK



## Agency Response

11/04/2019:

As suggested, the sentence has been added to the description of Component 4 under the section entitled "*Tailored Technical Assistance to National Child Project Implementation*" on p. 24 of the PFD.

10/31/19

Regarding better defining the alternative scenario, please see our response for the GEF Sec comments directly above. We've taken various steps, including in the baseline section and by reworking the theory of change to address this.

Regarding 'tailored TA', more detail has been added to Part II, 3.2 (program design)

Regarding Figure 2 on the niche role, this been updated to reflect private sector investment and mobilization, and also moved up to be more prominent in Part II, 3.1 (key features)

**4. Is the project/program aligned with focal area and/or Impact Program strategies?**

**Secretariat Comment at PIF/Work Program Inclusion**

11/01/2019, FB:

This item is cleared.

The program is well aligned to the focal area strategy for GEF7, as it refers to CCM-1-1.

**Agency Response**

**5. Is the incremental / additional cost reasoning properly described as per the Guidelines provided in GEF/C.31/12?**

**Secretariat Comment at PIF/Work Program Inclusion**

11/01/2019, FB:

**This item is cleared.**

All previous comments have been addressed.

10/24/2019: please address the following comments

- As per previous comments to questions 2 and 3, please revise and expand this section, based on the definition of (1) a baseline (minigrid reference cost, with estimation of year-on-year physiological "normal/dynamic" cost reductions that are not associated with the GEF intervention, and (2) an alternative scenario attributable to the GEF program and associated co-financing. OK - as noted in comment above.

- Please follow the steps provided in the Operational Guidelines for Incremental Cost

Analysis: [https://www.thegef.org/sites/default/files/documents/C.31.12\\_Operational\\_Guidelines\\_for\\_Incremental\\_Costs-2007\\_0.pdf](https://www.thegef.org/sites/default/files/documents/C.31.12_Operational_Guidelines_for_Incremental_Costs-2007_0.pdf)

- Regarding the portion of GEF resources that will be used as investment for capital expenditures, please clarify how these will be assigned. In particular, how will the incremental cost principle be applied to capital expenditures/INV components? It should be clarified that GEF INV resources will only be used to cover the cost of the de-risking for each specific minigrid being tested, and not the "business as usual" minigrid cost. OK

## **Agency Response**

10/31/19

Thanks for these comments. Addressing these comments, and also building on our responses and edits to the GEF Sec comments in questions 2 and 3, we have now inserted additional text in Part II, 5 (incremental cost reasoning).

Regarding GEF INV, we have inserted some initial text in Part II, 3.2 (component 2 description) clearly stating the principles on which such investment will be made. This will be further elaborated at the PPG stage.

**6. Are the project's/program's indicative targeted contributions to global environmental benefits (measured through core indicators) reasonable and achievable? Or for adaptation benefits?**

## Secretariat Comment at PIF/Work Program Inclusion

11/04/2019, FB

This item is cleared.

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11/01/2019, FB:

- Please note that footnotes, including the one for the grid emission factor source, are not displaying well. Please revise.

Other comment is cleared.

10/24/2019: please address the following comments

- Please include reference on the emission factor used for the GHG ER calculation.
- Assumptions on consequential emission reductions: please justify the assumptions in terms of share of the unelectrified population that would be benefitted by the Program. The assumption may be high, considering other energy access methods (e.g. grid expansion and solar home systems).

- **Consequential emission mitigation** is calculated using a top-down approach, on the basis that the project contributes to an enabled environment which subsequently attracts minigrid investment. A time frame of a 4 year national child project, with a further 10 year post-project period is assumed. The methodology further assumes that minigrids will address either 33%, 20% or 15% (depending on country context) of the current unelectrified population in the particular country, with a 20 year technology lifetime for minigrids. Thereafter is applies a causality factor varying between 20% and 80%, chosen based on the state of the minigrid market development and ongoing baseline initiatives in each country.

## Agency Response

11/04/2019:

The footnotes display well in the Word document. We have tried to adjust how they are displayed in the portal.

10/31/19

Regarding emission factors, we've now inserted a reference for this.

Regarding the methodology, the share of minigrids in off-grid electrification has adopted an approach of categorizing child countries into 3-tiers based on several criteria, including (1) current levels of grid coverage; (2) recent and ongoing initiatives for grid extension; (3) geographical size of countries; and (4) spread of off-grid communities in terms of population density. These assumptions have also been incorporated in the PFD. As per the edits in response to an earlier comment, the IEA estimates that approximately 45%, 450m of the approximately 1 billion unelectrified, will be addressed by minigrids. We therefore think that these assumptions are likely on the conservative side.

**7. Is there potential for innovation, sustainability and scaling up in this project?**

### **Secretariat Comment at PIF/Work Program Inclusion**

11/01/2019, FB:

This item is cleared.

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10/24/2019: please address the following comments

Yes, the project has significant potential to promote innovation, both in terms of technology, business models, and in terms of financial instruments.

- The following text represents the essence of the program. It would be good to have it expanded and presented more upfront in the document, in description of problem and solution, so that the reader can appreciate the logic of the Program earlier on.

### **Innovation**

The Program's primary innovation is its extensive focus on cost-reduction and business model innovation to reduce minigrid cost, with the overall aim to increase the affordability of renewable electricity to off-grid markets. Since off-grid market development cannot be met solely through public investments and development aid, a more sustainable approach is to involve private sector participation in off-grid electrification using PV minigrids. Reductions in financing costs is underlined by the theory of change that proposes to reduce, eliminate or transfer the investor's risks using appropriate derisking instruments, thereby reducing the investor's cost of capital (equity and debt). In addition to reducing financing costs, emphasis will be given to hardware and soft cost reductions, all of which will act in synergy to decrease the cost of renewable electricity in rural settings. In addition, the Program will operationalize innovative business models centered on productive energy uses, providing economic opportunities in the form of income-generating activities for local communities. The combined effects of decreasing electricity costs and improved economic conditions will be the increased affordability and capacity to pay for renewable electricity by end users. In a derisked investment environment, the increasing demand driven by low cost of electricity will catalyze further investments in renewable minigrids thereby creating a virtuous circle for scaling up investments and contributing to higher levels of rural electrification. All of this will be done using a programmatic approach without compromising each Child Country's specific needs.

### **Agency Response**

10/31/2019

Yes, this thinking is now articulated clearer in the document by the various new edits on minigrid costs in the baseline, and the reworked theory of change section.

### **Project/Program Map and Coordinates**

**Is there a preliminary geo-reference to the project's/program's intended location?**

### **Secretariat Comment at PIF/Work Program Inclusion**

11/01/2019, FB:

This item is cleared.

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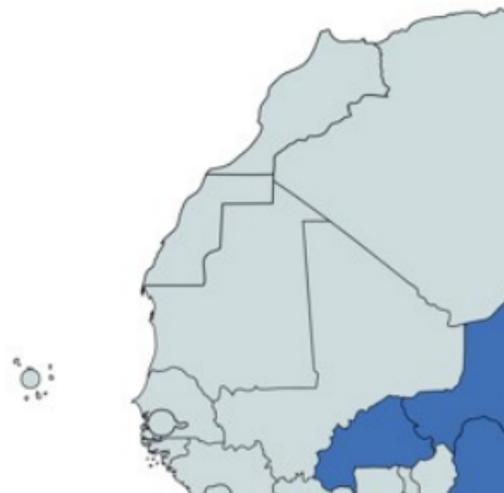
11/01/2019, FB:

- please note that the map included in the in the regional child project concept note is not displaying properly.

for between 2021 and 2024 as per Table 6 Annex E in the TFD – 10.11 in total – will be invited to participate in the program with observer status.

- A final category can come from all other interested countries. In this regard, the program can be viewed as a public good that will seek to be inclusive, open and accessible, making its knowledge tools available to all interested parties.

**Figure 1. Map showing the geographical location of participating countries**



*Describe the existing or planned baseline investments, including current institutional framework and processes for stakeholder engagement and gender integration;*

There are several private and development partner-supported baseline initiatives that the AMP will complement based on a robust Theory of Change (discussed below) underlined by innovative business models aimed at cost-reduction and productive energy uses. The detailed list of baseline initiatives is given in the PFD. Table 2 provides a summary of the main initiatives.

**Table 2: Baseline activities**

Agency/ Initiative	Description
RMI	RMI is currently supporting minigrid policy, strategy, and regulatory framework development in Nigeria and Ethiopia. It has performed research and published several widely-read reports on the minigrid market in sub-Saharan Africa. RMI has participated in and hosted several regional minigrid convening events.
UNDP	UNDP’s baseline activities in minigrids are composed of its DREI framework, as well as its on-the-ground support to developing countries, including execution of GEF-financed projects
AfDB	AfDB is actively supporting minigrids via the Green Mini Grid Market Development Program, SEFA, FEI, and GCF projects, amongst others.

## **Agency Response**

11/04/2019:

This again appears to be an issue with how the map is displayed in the portal. We've played around to see if we can resolve this. If the issue remains, would your colleagues at the GEF Secretariat be able to provide guidance on this?

## **Stakeholders**

**Does the PIF/PFD include indicative information on Stakeholders engagement to date? If not, is the justification provided appropriate? Does the PIF/PFD include information about the proposed means of future engagement?**

## **Secretariat Comment at PIF/Work Program Inclusion**

11/01/2019, FB:

This item is cleared.

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10/24/2019: please address the following comments during the development of the Child Projects.

Yes, information on stakeholders' consultation is included.

However, GEFSEC would like to see a much stronger focus on consultation with the private sector during the further stages of project design. The key objective of the Program is to incentivize the private sector to participate in minigrid service provision through cost reduction and policy development. Input from the Private Sector is therefore essential for the design of the child projects.

## **Agency Response**

10/31/19

The comment from the GEF Secretariat has been noted and the program partners will ensure that there is a high degree of consultation with the private sector during the next stage of detailed project design, and this is continued in project implementation. Edits to the text to reflect this have been made in 4 (private sector engagement) and in Part II, 3.2 (program description, component 4)

**Gender Equality and Women's Empowerment**

**Is the articulation of gender context and indicative information on the importance and need to promote gender equality and the empowerment of women, adequate?**

**Secretariat Comment at PIF/Work Program Inclusion**

11/04/2019, FB:

This item is cleared.

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11/01/2019, FB:

As a minor comment, please see the attached picture, the table still comes across with a strange format and several words are underlined/marked as errors by the spelling check of MS Word. Please see if possible to revise further.

It is expected that opportunities for gender transformation can be achieved through the integration of women and youth in productive energy uses.

**Table 5. Summary of minigrid benefits**

	<b>Minigrid benefits</b>
Household	Food <u>preparation</u> ; Study after sunset ; Information and communication technologies ; Increased comfort ; Leisure and learning ; Food conservation ; Better nutrition
Productive use	Reduced physical <u>effort</u> ; Faster processing ; Cheaper price ; Greater range of services ; Business after dark ; Trade without travelling ; Market information ; Cool and frozen products
Community	Medical & Education services at <u>night</u> ; Safe communities ; Clean, reliable water supply ; Less time spent, less distance traveled ; Local new services ; Digital government services

*Source: Adapted from Practical Action Total Energy Access*

National Child Projects will include a specific gender component. Gender Action Plans (GAPs) will be developed as part of the National Child Projects, to ensure that the development of minigrids in each participating country considers the energy and income-generation needs and characteristics of men and women, as well as boys and girls (i.e. youth). GAPs will be developed based on in-depth gender analyses predicated on two hypotheses, namely: (1) gender gaps prevent women to reap full benefits of electrification; and (2) poor and vulnerable households are overly represented by women. The role, needs and expectations of women and youth in minigrid development will be carried out as using the gender analysis framework shown in Figure 8, and informed by the roles that women may play at different stages of a minigrid project cycle (Figure 9) that will be relevant to the investment component in National Child Projects.

10/24/2019: please address the following comments

- Table 5 is displayed poorly (as cut-and-pasted image). Please revise the format and re-include.
- the gender section makes reference to "Thematic Working Groups" (TWG), which are not explained or referred to elsewhere in the document. please explain.

## **Agency Response**

11/04/2019:

We have adjusted the formatting of Table 5. Summary of minigrid benefits.

10/31/19

Table 5 has now been reformatted.

Regarding working groups, we've removed the term TWG, and simply now refer to working groups. Various edits have been made to also bring these out more as part of the community of practice. Working groups organized around the program's three thematic areas (policies, private sector and financing) will be established and will convene regularly, with an emphasis on south-south cooperation, and minigrid cost reduction. Gender issues will be integrated in these working groups. This has now been clarified under the Gender Equality section.

### **Private Sector Engagement**

**Is the case made for private sector engagement consistent with the proposed approach?**

### **Secretariat Comment at PIF/Work Program Inclusion**

11/01/2019, FB:

This item is cleared.

As follow up actions to be checked before CEO ER:

With the view of maximizing private sector engagement, the Agency will elaborate specific Stakeholder Engagement Plans, with a clear focus on the private sector, detailing the modalities of consultation and inclusion of private sector stakeholders during the development and implementation of national projects and in the context of the working groups to be established under component 4 and through the regional child project.

10/24/2019: please address the following comments

- Please expand on the modalities of consultation and inclusion of private sector stakeholders during (i) the development of national projects and (ii) in the working groups to be established under component 4.
- Private sector engagement as displayed at PFD level is acceptable. However, as mentioned in the comment above, more consultation and inputs from the Psec are going to be needed during further design stages.

## **Agency Response**

10/31/19

This is noted and will be acted upon. When developing the national and regional child projects in the PPG stage, particular attention will be given to active consultation using mechanisms such as workshops with country-specific stakeholders such as minigrad developers and minigrad industry associations. UNDP's DREI analysis, which actively sources quantitative data on investment risks from the private sector, may also be used. Building off this, during project implementation, private sector engagement will be central to the project, whether with industry groups, financiers, or specific minigrad developers, in order to solicit ongoing feedback and inputs, and ultimately to catalyze private sector investment. These stakeholders will also be invited to participate in the program's community of practice and working groups.

Edits to the text to reflect this have been made in 4 (private sector engagement) and in Part II, 3.2 (program description, component 4)

## **Risks**

**Does the project/program consider potential major risks, including the consequences of climate change, that might prevent the project objectives from being achieved or may be resulting from project/program implementation, and propose measures that address these risks to be further developed during the project design?**

**Secretariat Comment at PIF/Work Program Inclusion**

11/01/2019, FB:

This item is cleared.

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10/24/2019: please address the following comments

- In the Mitigation Actions for the Financial Risk there is a list of modalities that the Program will look to use to minimize risk. Number 3 (microfinance) and 4 (PAYGO) are never mentioned before in the document. While PAYGO may be justifiable and recommendable, it could have been mentioned above as one of the solutions outlined. For microfinance however, it is unclear how the program would intend to use microfinance as a tool; This is not the focus of the project, and if it was it would need to be discussed and explained upfront in the document.
- Social Acceptability Risk: Some of the elements described in this sections could be included in the program description as they are not mentioned earlier and appear to be relevant for the program design:

may remain uncompetitive.	I=3	
<p><b>Social Acceptability risk</b></p> <p>Solar-battery minigrid systems will have to compete with an incumbent technology, and the lack of knowledge and perceived benefits and uses of the new technology may result in a low-level adoption rate.</p>	<p>Moderate</p> <p>P=3</p> <p>I=3</p>	<p>The Program will invest in awareness raising and capacity building of target communities on the uses and benefits of low-carbon minigrids. Notwithstanding the development of productive energy uses, a main benefit it is the creation of green jobs in the technology supply chain. As far as practicable, the affordability of the new technology will be demonstrated from avoided energy costs on prevailing baseline technology options. Affordability can be a trigger for new technology acceptability, and the financing measures discussed above will help reduce social acceptability risks. Finally, the hybrid business model will involve the close participation of local communities in the design, installation, commissioning and operation of minigrids in one or more of the following: (1) participation in the capital structure of minigrids; (2) in-kind contribution through provision of land and/or labor; and (3) involvement in the setting up electricity tariffs.</p>
		Results of climate models for country (target year) will be presented

**Agency Response**

10/31/19

Regarding financial risk

- All references to use of microfinance has been removed.

o Indeed PAYG solar was not sufficiently referenced in the original submission. In response to an earlier comment, as well as this, edits have now been made in Part I, 1 (global environmental route causes) describing the three routes to electrification – grid extension, minigrids and PAYG solar.

Regarding social acceptability risk, there are existing references (no new edits) to hybrid models and community involvement in sub-section 2.2 (minigrid business models) in Part II, 2 (baseline). On this basis we’ve not made any further changes for the time-being. If it would be helpful to further bring this out, and we can do so.

**Coordination**

**Is the institutional arrangement for project/program coordination including management, monitoring and evaluation outlined? Is there a description of possible coordination with relevant GEF-financed projects/programs and other bilateral/multilateral initiatives in the project/program area?**

### **Secretariat Comment at PIF/Work Program Inclusion**

11/04/2019, FB:

This item is cleared.

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11/01/2019, FB:

- Please revise the language relative to National child projects implementation and execution:

(i) it should mention that UNDP will act as implementation agency for most national child projects, with the exception joint implementation agency status with AfDB in countries XX, and that AfDB will be sole implementation agency in XX country.

(ii) please mention that local government agencies will be executing agencies for the national projects.

- All other previous comments have been addressed.

10/24/2019: please address the following comments

- UNDP cannot be the executing entity of the Program (which the only exception of the regional child Project), so please revise the diagram detailing the program organization structure as it is confusing.

- Thematic Working Groups indicated in the diagram: these are never discussed above in the PFD document. If it is the intention of the proponent to establish TWGs, this needs to be detailed and justified in the program description, and properly budgeted with clear budget line in the components description. The Regional Child concept (component 1, project outcomes) mentions "the program's three thematic areas"), but again these are not clearly outlined in the PFD.

- There is mention of the child projects contributing 50-100k to cover the cost of their participation in the program. It would be helpful to mention this earlier in the document, as it indicates country buy-in for the regional component, it strengthen the technical part of the regional component as it will not have to cover these costs,

and further justify the programmatic approach taken with this GEF Program. It should also be mentioned in the regional child, and in each of the national child projects.

- Section titled "Summary of UNDP-GEF minigrid projects in Africa": it would be helpful to also include a quick mention of the energy access (non just minigrids) projects which are ongoing, and why this new program is not a duplication. in Nigeria for instance, the GEF7 child project will have to be clearly outlines the added value of the new program, on top of what already is ongoing in the country as part of the GEF6 project.

## **Agency Response**

11/04/2019:

The relevant text has been incorporated as requested under the Coordination section on p. 38.

10/31/19

With regard to the diagram, we've removed the reference to executing entity and simplified the diagram. We've also removed references to TWGs. This was unnecessary detail.

With regard to national child project budget to the program, we've inserted new text in the PFD on this at the end of Part II, 3.2 (program design and components). This is already mentioned in the regional child project, and is now explicitly inserted in each national child project.

With regard to other ongoing energy access projects in the region, the following text has been added to section 6 on coordination "In addition to the minigrid projects mentioned above, there are several ongoing GEF-funded broader energy access projects in Africa, such as new solar PAYG projects in Nigeria and Angola. These projects are in general promoting alternative technology choices, namely PAYG solar, to off-grid electrification, and in this manner will complement the program

well. Areas of complementarity may for example include tecno-economic geo-spatial analyses to identify the lowest costs technology solution for any particular location. More ambitiously, and in the longer term, there may also be the opportunity to integrate PAYG solar into minigrids, increasing generation capacity and enabling peer-to-peer markets for power (including potential distributed block-chain solutions).”

#### **Consistency with National Priorities**

**Has the project/program cited alignment with any of the recipient country’s national strategies and plans or reports and assessments under relevant conventions?**

#### **Secretariat Comment at PIF/Work Program Inclusion**

11/01/2019, FB:

This item is cleared.

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10/24/2019: please address the following comments

- Table 6: for consistency, please convert all units of measurement for GHGs to million tons of CO<sub>2</sub>e (MtCO<sub>2</sub>e), instead of GgCO<sub>2</sub>e.

#### **Agency Response**

10/31/19

The units of measurement for the GHG emission reductions have now been converted to million tons of CO<sub>2</sub>e in the Global Environment Benefits section on p. 24 and the Environmental Sustainability section on p. 26. As the unit in the core indicators table is metric tons of CO<sub>2</sub>e, we have kept those numbers expressed in metric tons.

#### **Knowledge Management**

**Is the proposed “knowledge management (KM) approach” in line with GEF requirements to foster learning and sharing from relevant projects/programs, initiatives and evaluations; and contribute to the project’s/program’s overall impact and sustainability?**

**Secretariat Comment at PIF/Work Program Inclusion**

11/01/2019, FB:

This item is cleared.

The knowledge management components detailed in the PFD are considered adequate.

**Agency Response**

**Part III – Country Endorsements**

**Has the project/program been endorsed by the country’s GEF Operational Focal Point and has the name and position been checked against the GEF data base?**

**Secretariat Comment at PIF/Work Program Inclusion**

11/04/2019, FB:

**This item is cleared.**

- Valid LOEs were submitted for Ethiopia and Somalia.

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11/01/2019, FB: please address the following comment:

Valid LoEs, signed by the correct OFP, for Somalia and Ethiopia are to be submitted.

It is noted that Niger was removed from the program.

10/24/2019: please address the following comments

- Niger OFP LOE was not found in Portal. Please add the document or remove the country from the PDF.
- OFP endorsement letters for Somalia and Ethiopia are not signed by the correct OFP. Please consult the list of current OFPs at: [https://www.thegef.org/focal\\_points\\_list](https://www.thegef.org/focal_points_list)

### **Agency Response**

11/04/2019:

We have received revised LOEs for Ethiopia and Somalia, which have been included in our resubmission.

10/31/19

While discussions with the Niger OFP continue, given the time constraints, we have removed Niger from this submission and may include it as a second round national child project, or a standalone project with linkages.

We have requested revised OFP endorsement letters for Somalia and Ethiopia.

- We have received the Ethiopia letter
- We are following up with Somalia.

**Termsheet, reflow table and agency capacity in NGI Projects**

**Does the project provide sufficient detail in Annex A (indicative termsheet) to take a decision on the following selection criteria: co-financing ratios, financial terms and conditions, and financial additionality? If not, please provide comments. Does the project provide a detailed reflow table in Annex B to assess the project capacity of**

generating reflows? If not, please provide comments. After reading the questionnaire in Annex C, is the Partner Agency eligible to administer concessional finance? If not, please provide comments.

### Secretariat Comment at PIF/Work Program Inclusion

11/04/2019, FB:

This item is cleared.

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11/01/2019, FB: please address the following comment:

- Regional Child Project:

--- **Important:** We have noted that the Regional Child Project does not have a Core Indicator Worksheet. There should absolutely be one. There should be allocation of a certain level of emission reductions at Regional Child Project level. The regional child should be included in the table listed in the section on GEBs which include the individual child project's contribution to Program-level GEBs. The Regional Child Project should produce emission reductions in addition to the sum of all national projects. These would correspond to the additional emissions that are to be expected from the provision of technical support and knowledge tools to national child projects, and therefore they would be "indirect" as no direct investment would be done under the regional child. OK

- Burkina Faso: the following question was not addressed: Component 3 lists almost 7 million for capacity building (only 130k from GEF) - is that much capacity building really justifiable/needed? At the same time there is 0 cofinancing for Component 4. Perhaps that also include an Investment component that is not listed? Please clarify. OK

10/24/2019: **CHILD PROJECTS COMMENTS:**

in addition to the comments above re: non-CCM components to be removed, please note:

- Regional Project: it mentions the 3 thematic areas in table for project components, but it does not covers them in the description. Please revise. OK

- Regional Project:Table of the baseline activities: GCF is misspelled as "GCD". OK

- Regional Project: Component 2 would benefit from more details on how the TA tailored support will be awarded to national child projects. What is the method for requesting this support? OK

- Several Child Projects: where there is mention of a pilot minigrid, please include estimate of the installed capacity so that cost per KW installed can be spelled out. This is important information as it related to the cost reduction baseline. If possible, please also include expected location of the installations. Finally, where there are several activities/outputs in the component, the cost for both GEF and cofinance should be presented dis-aggregated between TA and investment outputs, and allocated to each different outcome, to allow for the isolation of the amounts going into infrastructure investment as opposed to TA. OK

- Burkina Faso: The Child Project include a component 1 where one of the project outcomes refers to efficient charcoal and firewood. This is outside the program scope, background justification and and theory of change. Such reference should be removed. OK

Burkina Faso: Component 3 lists almost 7 million for capacity building (only 130k from GEF) - is that much capacity building really justifiable/needed? At the same time there is 0 cofinancing for Component 4. Please explain.

- Angola: Component 2 seems to be entirely TA, but it lists INV as type of financing. Please explain or revise. OK

-Niger: Component 2 seems to be entirely TA, but it lists INV as type of financing. Please explain or revise. Niger was removed from the PFD.

## **Agency Response**

11/04/2019:

For the regional child project's GEBs, we now allocate 10% of the indirect GHG impacts at national child projects to the regional child project, in line with the apportioning of the overall program budget. In parallel, in terms of the figures for each of the national child projects, we'll now adjust the earlier numbers and net 10% out of the indirect totals out. We state this methodology will be further developed prior to CEO endorsement.

Regarding the distribution of co-financing for the Burkina Faso project, low capacity in the financial sector has been identified as a key barrier to minigrid development and stakeholders we talked to expressed the need and interest in strengthening the sector and innovative financing mechanisms. Donor partners like GCF, AfDB and the World Bank are all providing support on capacity building as well. We have now allocated \$2,000,000 in co-financing for Component 4. During further project development, we will coordinate with the partners (GCF, World Bank, etc.) to get a more detailed breakdown of their funding allocations (compared to what we could get from secondary sources).

**GEFSEC DECISION**

**RECOMMENDATION**

**Is the PIF/PFD recommended for technical clearance? Is the PPG (if requested) being recommended for clearance?**

**Secretariat Comment at PIF/Work Program Inclusion**

11/06/2019, FB:

Yes, the PFD is technically cleared.

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11/05/2019, FB:

Not yet at this stage, please address the remaining comments in the review sheet and resubmit.

11/04/2019, FB:

Not yet at this stage, please address the remaining comments in the review sheet and resubmit.

11/01/2019, FB:

**Not yet at this stage, please address the remaining comments in the review sheet and resubmit.**

- Please conduct a last check for spelling and font/formatting issues; there are several sections which appear to have mis-matching font (for example in Part II, section 1a, 1);

- When done, please remove the yellow highlighter from previously cleared comments/sections.

**10/24/2019: Not at this stage, please address comments above and resubmit.**

**ADDITIONAL COMMENTS**

**Additional recommendations to be considered by Agency at the time of CEO endorsement/approval.**

**Secretariat Comment at PIF/Work Program Inclusion**

**11/01/2019, FB: Agency is required to perform the following actions before CEO ER submission:**

1. With the view of maximizing private sector engagement, the Agency will elaborate specific Stakeholder Engagement Plans, with a clear focus on the private sector, detailing the modalities of consultation and inclusion of private sector stakeholders during the development and implementation of national projects and in the context of the working groups to be established under component 4 and through the regional child project.
2. An numeric analysis should be performed to support the estimation of the cost reduction potential, and allow for the estimates of the GEB contribution of the Program vis-a-vis the existing baseline to be further refined. This should be performed in line with the principle of incremental cost of GEF interventions.

**Review Dates**

	<b>PIF Review</b>	<b>Agency Response</b>
<b>First Review</b>		
<b>Additional Review (as necessary)</b>		
<b>Additional Review (as necessary)</b>		
<b>Additional Review (as necessary)</b>		

PIF Review

Agency Response

**Additional Review (as necessary)**

