

# National child project under the GEF Africa Mini-grids Program Nigeria

Review CEO Endorsement and Make a recommendation

## Basic project information

**GEF ID**

10477

**Countries**

Nigeria

**Project Name**

National child project under the GEF Africa Mini-grids Program Nigeria

**Agencies**

UNDP

**Date received by PM**

6/18/2021

**Review completed by PM**

10/21/2021

**Program Manager**

Filippo Berardi

**Focal Area**

Climate Change

**Project Type**

FSP

## **PIF**

### **CEO Endorsement**

#### **Part I ? Project Information**

##### **Focal area elements**

**1. Does the project remain aligned with the relevant GEF focal area elements as presented in PIF (as indicated in table A)?**

Secretariat Comment at CEO Endorsement Request  
**Item cleared.**

FB: 07/15/21:

Yes, the child project is aligned with the focal area elements.

Agency Response  
**Project description summary**

**2. Is the project structure/design appropriate to achieve the expected outcomes and outputs as in Table B and described in the project document?**

Secretariat Comment at CEO Endorsement Request  
**This item is cleared.**

**10/15/2021, FB:**

**FB: 07/15/21:**

Yes, the child project design is appropriate to achieve expected outcomes.

if possible, we would request submission of the detailed budget by output and activity level.

In addition, please note that the budget in the standard GEF format as per GEF policy guidelines is required in attachment.

Agency Response

C.O. 10/07/21

The detailed budget by output and at activity level is provided in the spreadsheet attached as Annex 18 to the project document.

The budget in the standard GEF format as per GEF policy guidelines is provided in Annex 2 to the project document.

**3. If this is a non-grant instrument, has a reflow calendar been presented in Annex D?**

Secretariat Comment at CEO Endorsement Request N/A

Agency Response

**Co-financing**

**4. Are the confirmed expected amounts, sources and types of co-financing adequately documented, with supporting evidence and a description on how the breakdown of co-financing was identified and meets the definition of investment mobilized, and a description of any major changes from PIF, consistent with the requirements of the Co-Financing Policy and Guidelines?**

Secretariat Comment at CEO Endorsement Request

**Item cleared.**

**FB: 10/21/21**

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**FB: 10/15/21:**

1. cleared.

2. Not cleared. The co-financing letter indicate an amount of 208 million from AfDB and AGTF (no split provided).

Entity	Country/Project Name	Amount	Type	Time-frame-
African Development Bank Group (ADB window) + Africa Growing Together Fund (AGTF)	Nigeria / Nigerian Electrification Project (NEP)	USD 208 million	Investment – Loan	2018 - 2024

However, Table C in the CEO endorsement request only lists 89 million and only from AfDB.

GEF Agency	African Development Bank	Loans	Investment mobilized	89,000,000.00
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Please correct and/or explain in detail this difference in the section below Table C.

3. cleared.

**FB: 07/15/21:**

Please address the following comments:

1. REA: a valid co-financing letter has been provided. However, the 10mil grant should be classified as Investment Mobilized as the co-financing Letter states that it is a grant from the GoN to capitalize the Rural Electrification Fund. Please also describe how investment mobilized was identified in the section below table C.

2. AfDB: It is not clear from the information provided why 89 million from the AfDB cofinancing letter were earmarked to this project. Please provide more details and rationale and include that in the section on "how investment mobilized was identified" (section below table C).

3. The section on how investment mobilized was identified refers to equity investments from "Divindus" which are not further explained nor detailed in table C. Please clarify the meaning of this reference.

Agency Response

C.O. 10/20/21

2. Indeed, the letter of co-financing combined the loan from AfDB with the loan from the Africa Growing Together Fund (AGTF), for a total of USD 208 million. According

to information from AfDB (see for instance [this article](#) and the [NEP appraisal report](#)), AfDB (ADB window) contribution to the NEP was a USD 150 million loan. We have therefore revised the AfDB loan co-financing by prorating this amount over the project period. This leads to  $150M \times 3/7 = \text{USD } 64.285714$  million loan co-financing from AfDB instead of the initial amount of USD 89 million. The project document and CEO ER have been updated accordingly (see text highlighted in green).

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C.O. 10/07/21

1. As per guidance received from GEFSec, the USD 10 million grant from REA has been reclassified as Investment Mobilized. Also, description has been added in the Section below Table C in the CEO ER as how the investment was mobilized. In sum, the REA is the Executing Agency for this full NIM project ? i.e. REA is fully entrusted to implementing all project activities. As the Executing Agency, and to demonstrate country ownership, it was important for the REA to demonstrate its active role in the project design, implementation and monitoring and evaluation. One way to achieve this was through cash co-financing through the capitalization of the REF by the Federal Government of Nigeria.

2. The African Development Bank (AfDB) is implementing the Nigeria Electrification Project (NEP) with the REA as explained in Annex 13 to the project document. Discussions were held with AfDB representatives regarding the alignment of the Nigeria child project with the NEP as summarized in Annex 19 to the project document. The ongoing AfDB NEP initiatives in the Nigerian off-grid energy market have been therefore identified as sources of co-financing. Since the AfDB is a GEF Agency participating in the AMP and given that it is funding off-grid electrification projects in several child projects, a decision was made to procure a single letter of co-financing that covers relevant child countries.

In the AfDB letter of co-financing, there are two budget lines that are attributed to Nigeria, namely: (1) USD 208 million loan for the NEP (2018 ? 2024); and (2) USD 500,000 grant from the Energy Access Fund (2019 - 2022). Since part of these co-financing sources represent sunk costs, only the budgets related to the period overlapping with the Nigeria child project (2021 ? 2025) have been considered as co-financing. This translates to USD 89 million in loan and USD 125,000 in grant co-financing. Description has been added in the Section below Table C in the CEO ER as how the investment was mobilized.

3. Reference to ?Divindus? is a mistake. We thank you for pointing this out. The reference to ?Divindus? has been removed.

**GEF Resource Availability**

**5. Is the financing presented in Table D adequate and does the project demonstrate a cost-effective approach to meet the project objectives?**

Secretariat Comment at CEO Endorsement Request

**Item cleared.**

FB: 07/15/21:

Yes, the financing listed in Table D appears adequate to meet the project's objectives.

Agency Response

**Project Preparation Grant**

**6. Is the status and utilization of the PPG reported in Annex C in the document?**

Secretariat Comment at CEO Endorsement Request

**Item cleared.**

**FB: 10/21/21**

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**FB: 10/15/21:**

1. Annex C to the CEO ER document should be updated to reflect the content of the answer provided.

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**FB: 07/15/21:**

1. Yes, Annex C presents the status of utilization of PPG resources. However, while all resources have been committed, only \$12,600.out of \$150,000 have been spent. Please provide explanation of why this is the case, and an update on the plan and timing for the use of the additional resources. Please note that according to GEF policy: "The Agency can continue to use the remaining funds only on the eligible expenditure items under

PPG as presented in Table 1 within one year after the project has been CEO Endorsed/Approved. Thereafter, any unused PPG funds must be returned to the Trustee, for credit to the respective GEF Trust Fund."

#### Agency Response

C.O. 10/20/21

1. Thank you, Annex C to the CEO ER has been updated.

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C.O. 10/07/21

As of mid-September 2021, current expenditures are USD 77,927 and commitments are USD 72,073, for a total of USD 150,000. Therefore, the full PPG grant will be used before the abovementioned deadline

#### Core indicators

7. Are there changes/adjustments made in the core indicator targets indicated in Table E? Do they remain realistic?

Secretariat Comment at CEO Endorsement Request

**Item cleared.**

**FB: 10/15/21**

1. Cleared.
2. Cleared.
3. Cleared.

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**FB: 07/15/21:**

Estimates for core indicator 6 have been included. However, please address the following comments:

1. Please provide a calculation sheet for core indicator 6 figures reported.

2. Additional explanation and details on the rationale and logic steps/methodology used to determine indirect emission reductions is needed in Para 55. Please include an explanation that covers, inter alia, the following elements:

a- What is the rationale of using a replication factor of 8?

b- How is the post project market potential determined?

c- What is the relation between bottom up and top down, since only bottom up seems to be included in the reported numbers under indicator 6?

3. Please clarify the way co-financing amounts are used to determine emission reduction targets. It seems only GEF financing is being used.

### Agency Response

C.O. 10/07/21

1. The calculation sheet for the core indicator 6 is included in the spreadsheet attached as Annex 18 to the project document (see the last sheet labelled 'CoreInd' in the spreadsheet). Please also note that all the calculations for Core Indicators are also given at the end of Annex 13 to the project document.

2. The details and assumptions used in determining indirect emissions reductions are given at the end of Annex 13 to the project document, and in the aforementioned 'CoreInd' spreadsheet in Annex 18 to the project document. As per guidance received above, paragraph 56 of the CEO ER (previously 55) has been expanded to include the requested details. Text has been added in paragraph 56 to situate the relationship between the two approaches top-down and bottom-up approaches, and to explain why only the top-down value of indirect ER has been used for Indicator 6 in Annex F to the CEO ER.

3. It is correct that only GEF INV has been included in the calculation of direct emission reductions. This has been clarified in paragraph 55 of the CEO ER with more details on the methodological approach.

### Part II ? Project Justification

**1. Is there a sufficient elaboration on how the global environmental/adaptation problems, including the root causes and barriers, are going to be addressed?**

Secretariat Comment at CEO Endorsement Request

**Item cleared.**



**FB: 10/21/21**

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**FB: 10/15/21:**

1. cleared.
2. The TOC should be included in the body of the CEO ER document which is live in the portal, in addition to being uploaded as a separate annex to the Agency ProDoc. We need all key documents to be included in the CEO ER document version that will be circulated to Council, as we do not circulate annexes.

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**FB: 07/15/21:**

Yes, there is sufficient elaboration of the problem, causes and barriers. please address the general comments below:

1. General comment: the Annexes numbering throughout the document is confusing: all annexes are indicated in letters (e.g. Annex J) in the CEO ER document in the GEF portal, but no annexes are provided. Conversely, all Annexes in the ProDoc are in Numbers. Can the Agency please harmonize this, and ensure reference to annexes in the CEO ER GEF document is made to the ones in the ProDoc so that is clear?
2. A theory of Change should be included in the GEF CEO ER doc live on the portal. The one in the ProDoc seems to apply to the general AMP program, but not to the Nigeria child project. While there will be overlaps, each child project should have their specific TOC.

Agency Response

C.O. 10/20/21

2. The TOC has been included as Figure 1 in the body of the CEO ER.

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C.O. 10/07/21

1. Annexes A to G have been kept in the CEO ER, while all other annexes mentioned in the CEO ER are now making reference to the annexes to the project document (labeled with numbers).

2. A project-specific Theory of Change (ToC) has been developed for the Nigeria Child Project. Same has now been included in the resubmission package (see Annex 1 to the project document) to address the specific barriers that exist in the baseline scenario in Nigeria, as well as the country-specific interventions, which, as rightly mentioned by the GEF reviewer, are not similar to other AMP participating countries. The ToC also integrates a gender-differentiated approach and reflects all the features of the agriculture-energy nexus illustrated in the Causal Loop Diagram shown in Figure 3 in the project document.

**2. Is there an elaboration on how the baseline scenario or any associated baseline projects were derived?**

Secretariat Comment at CEO Endorsement Request

**Item cleared.**

FB: 07/15/21:

Yes, there is sufficient elaboration of the baseline scenario and associated projects.

Agency Response

**3. Is the proposed alternative scenario as described in PIF/PFD sound and adequate? Is there sufficient clarity on the expected outcomes and components of the project and a description on the project is aiming to achieve them?**

Secretariat Comment at PIF/Work Program Inclusion

**Item cleared.**

FB: 07/15/21:

Yes, the proposed alternative scenario is well presented and there is sufficient clarity on the expected outcomes and how they should be achieved.

Agency Response

**4. Is there further elaboration on how the project is aligned with focal area/impact program strategies?**

Secretariat Comment at CEO Endorsement Request

**Item cleared.**

FB: 07/15/21: the project is well aligned with the CCM focal area strategy related to decentralized clean power systems and energy access.

Agency Response

**5. Is the incremental reasoning, contribution from the baseline, and co-financing clearly elaborated?**

Secretariat Comment at CEO Endorsement Request

**Item cleared.**

FB: 07/15/21: there is a good presentation of the incremental reasoning, which relates to (i) maximizing the use of cost and risk minimization tools and levers, (b) focus on productive uses especially on agricultural value chains, and (c) move beyond hybrid minigrids with diesel gensets backup to fully renewable ones.

Agency Response

**6. Is there further and better elaboration on the project's expected contribution to global environmental benefits or adaptation benefits?**

Secretariat Comment at CEO Endorsement Request

**Item cleared.**

FB: 07/15/21: please see comments on the section above on core indicators.

Agency Response

**7. Is there further and better elaboration to show that the project is innovative and sustainable including the potential for scaling up?**

Secretariat Comment at CEO Endorsement Request

**Item cleared.**

FB: 07/15/21: Yes, there is elaboration on the innovation components of the project (cost-levels/analysis, knowledge management and transfer to AMP, etc) and its sustainability through the execution by the REA and the capacity building to REA and private sector actors.

Agency Response

**Project Map and Coordinates**

**Is there an accurate and confirmed geo-referenced information where the project intervention will take place?**

Secretariat Comment at CEO Endorsement Request

**Item cleared.**

FB: 07/15/21: A project map is provided, although exact location of minigrids to be financed will only be determined during the project implementation.

Agency Response

**Child Project**

**If this is a child project, is there an adequate reflection of how it contributes to the overall program impact?**

Secretariat Comment at CEO Endorsement Request

**Item cleared.**

FB: 07/15/21: Yes, linkages to the AMP regional projects are highlighted, both in terms of knowledge management (both from and to) and in terms of contribution to core indicator 6.

Agency Response

**Stakeholders**

**Does the project include detailed report on stakeholders engaged during the design phase?  
Is there an adequate stakeholder engagement plan or equivalent documentation for the implementation phase, with information on Stakeholders who will be engaged, the means of engagement, and dissemination of information?**

Secretariat Comment at CEO Endorsement Request

**Item cleared.**

**FB: 10/21/21**

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**FB: 10/15/21:**

1. cleared.

2. Please include this information in the CEO ER document live in the portal:

opportune here to summarize the three ways in which feedbacks received from stakeholders have been integrated in the project design.

- a) a) Bilateral discussions: Annex 19 to the project document provides a summary of the discussions that took place with stakeholders including among others their (i) appreciation of the baseline situation; (ii) concerns; and (iii) expectations. The three elements were included in the project design, and the Stakeholder Engagement Plan (SEP – Annex 9 to the project document) indicates the involvement of different stakeholders at implementation relative to the proposed project outputs;
- b) b) Structured DREI interviews: As mentioned in the SEP, structured DREI interviews were carried out with selected private sector developers, while taking into account gender representativeness, as part of the DREI analyses; the results thereof are given in Annex 17 to the project document. This annex embeds the perceptions of the investment risk profile prevailing in the minigrids space in Nigeria. Both the qualitative and quantitative analyses of stakeholders' responses are captured in Annex 17, as well as the effectiveness of public derisking instruments; and;
- c) c) Inception and validation workshops: In addition to the above, project stakeholders had the opportunity to provide inputs and feedbacks at the project inception and validation stages. The views, comments and suggestions of stakeholders are captured in the Inception and Validation Workshop reports that are contained in Annex 19 to the project document. The SEP shows the output-level involvement of stakeholders at the implementation stage.

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- a) a) Bilateral discussions: Annex 19 to the project document provides a summary of the discussions that took place with stakeholders including among others their (i) appreciation of the baseline situation; (ii) concerns; and (iii) expectations. The three elements were included in the project design, and the Stakeholder Engagement Plan (SEP – Annex 9 to the project document) indicates the involvement of different stakeholders at implementation relative to the proposed project outputs;
- b) b) Structured DREI interviews: As mentioned in the SEP, structured DREI interviews were carried out with selected private sector developers, while taking into account gender representativeness, as part of the DREI analyses; the results thereof are given in Annex 17 to the project document. This annex embeds the perceptions of the investment risk profile prevailing in the minigrids space in Nigeria. Both the qualitative and quantitative analyses of stakeholders' responses are captured in Annex 17, as well as the effectiveness of public derisking instruments; and;
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**FB: 07/15/21:**

An account of the activities carried out during PPG stage to engage and consult with relevant stakeholders is included in the stakeholder engagement plan uploaded on the portal. However:

1. Annex 19 -which is said to include an account of the outcomes of the inception workshop held on 28 Oct 2020s not found in the project document section, nor in the ProDoc. Please provide it:

**Table 1. Stakeholders engagement activities during the PPG Phase.**

Method	Activity	Location	Date
Workshop	Inception workshop (the outcomes of the workshop and the list of participants is given in Annex 19.)	Virtual	28 October 2020
Engagement of community stakeholders	The PGG Team could not physically meet with stakeholders in rural communities. However, through a contact person, the Team was able to engage these stakeholders and collected information from one of the communities hosting solar PV minigrid in Cross River State in southern Nigeria.	Umon Island, Cross River State	2 <sup>nd</sup> February 2021
Bilateral meetings	Energy Commission of Nigeria; Rural Electrification Agency; and Policy Research and Statistic Department, Federal Ministry of Environment ( <i>national government</i> )	Abuja	8th October 2020 to 3 <sup>rd</sup> February 2021

2. Generally there is no mention of the feedbacks received on the projects by the stakeholders consulted, and no elaboration on whether the comments received (if any) were taken into consideration in the design of the project. Please provide information to this end in the section on stakeholders engagement of the CEO ER document.

**Agency Response**

C.O. 10/20/21

2. This has been included in the section on Stakeholders ( in the CEO ER).

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C.O. 10/07/21

- Annex 19 (Stakeholder Engagement in Baseline Analysis) has been provided as a separate document attached to the project document.
- The information may have been overlooked because not all relevant annexes were included in the first GEF submission. It is opportune here to summarize the three

ways in which feedbacks received from stakeholders have been integrated in the project design.

- a) a) Bilateral discussions: Annex 19 to the project document provides a summary of the discussions that took place with stakeholders including among others their (i) appreciation of the baseline situation; (ii) concerns; and (iii) expectations. The three elements were included in the project design, and the Stakeholder Engagement Plan (SEP ? Annex 9 to the project document) indicates the involvement of different stakeholders at implementation relative to the proposed project outputs;
- b) b) Structured DREI interviews: As mentioned in the SEP, structured DREI interviews were carried out with selected private sector developers, while taking into account gender representativeness, as part of the DREI analyses; the results thereof are given in Annex 17 to the project document. This annex embeds the perceptions of the investment risk profile prevailing in the minigrids space in Nigeria. Both the qualitative and quantitative analyses of stakeholders? responses are captured in Annex 17, as well as the effectiveness of public derisking instruments; and;
- c) c) Inception and validation workshops: In addition to the above, project stakeholders had the opportunity to provide inputs and feedbacks at the project inception and validation stages. The views, comments and suggestions of stakeholders are captured in the Inception and Validation Workshop reports that are contained in Annex 19 to the project document. The SEP shows the output-level involvement of stakeholders at the implementation stage.

#### **Gender Equality and Women?s Empowerment**

**Has the gender analysis been completed? Did the gender analysis identify any gender differences, gaps or opportunities linked to project/program objectives and activities? If so, does the project/program include gender-responsive activities, gender-sensitive indicators and expected results?**

Secretariat Comment at CEO Endorsement Request

**Item cleared.**

FB: 07/15/21: Yes, a well developed gender gap analysis is provided. In addition, the gender action plan includes specific targets for gender-specific actions included in the project design, and it specifies the budget available and responsibilities for execution for these activities.

Agency Response

**Private Sector Engagement**

**If there is a private sector engagement, is there an elaboration of its role as a financier and/or as a stakeholder?**

Secretariat Comment at CEO Endorsement Request

**Item cleared.**

**FB: 10/21/21**

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**FB, 10/15/21:**

1. Cleared.
  2. Please include a summary of the information provided in the review sheet in response to this comment into the CEO ER document live in the portal, in the stakeholder section.
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**FB, 07/15/21:**

this section is not well developed and should be strengthened.

1. In particular, please provide more details on the interactions with private sector during PPG stage, including with financial institutions and project developers.
2. Also, output 3.6 refers to investments made to strengthen the capacity of minigrids development associations. Please elaborate on the need and objectives, as well as on the interactions between the project and such associations.

Agency Response

C.O. 10/07/21

2. A summary of the information provided in the review sheet has been added in the Stakeholders section of the CEO ER, after Table 2 ( see text highlighted in green).
- 

C.O. 10/07/21



1. Interactions with private sector during the PPG took place through the three methods explained above related to stakeholder engagements, namely (i) bilateral meetings; (ii) DREI analyses; and (iii) participation in the Inception and Validation workshops. Of all the three methods, private sector engagement during PPG stage was particularly strong in DREI analyses. Among the private stakeholders who participated in the DREI interviews were solar PV minigrid developers and investors, as well as specialized consultancy firms supporting minigrid developers. One investor was involved in the setting of an aggregation platform for reducing portfolio risk and transaction costs for leveraging low-cost, patient equity capital denominated in foreign currency. For DREI analyses, the load profile used in LCOE modeling was provided by Rubitec Solar based on one of its minigrids that has been operating commercially since 2018. The results of the DREI analyses are given in Annex 17 to the project document.

2. Support for the institutional strengthening of the existing minigrids development association ? i.e. the Nigeria Chapter of AMDA - was identified at child concept note stage. After discussions with the private sector stakeholders and the Implementing Partner (Rural Electrification Agency), it was decided that the Nigeria child project should extend its support to the Renewable Energy Association, as well as any other relevant associations that can be identified during implementation. The main reasons are that several private sector actors are members of the two associations, and given the ambit of the Nigeria child project to support the development of both minigrids and renewable energy (in this case solar energy). This decision was discussed in the Inception Workshop and validated by stakeholders (Annex 19 to the project document, and captured in Table 1 in the CEO ER listing changes brought at PPG stage). From the REA's perspective, it was very important to have functional associations as this would make its outreach activities to private sector operators a lot more productive ? i.e. more efficient and effective to reach out to associations than individual actors. This in turn will require the coordination and outreach capabilities of the associations to be strengthened. Hence, the first objective is to strengthen such capabilities of the two associations and is covered by Activity 3.6.1. Technical assistance will comprise supporting the formulation of a strategic plan for the associations in order to formalise their operation, and to enhance their networking, public outreach and advocacy activities. Another objective is to enable private actors in the minigrids value chains to interface with a broad range of stakeholders who are important in policy decision making. Hence, there is need to establish a national coordination platform that will enable constructive exchanges between industry associations, minigrids developers, financial institutions and public policy decision-makers. This is to be achieved by Activity 3.6.2 and discussions can be informed by the results of DREI analyses (Annex 17 to the project document). The final objective, relates to exchanges between private stakeholders in Nigeria and those in other participating countries through the regional project Community of Practice and its technical cohorts (Activity 3.6.3).

## **Risks to Achieving Project Objectives**

**Has the project elaborated on indicated risks, including climate change, potential social and environmental risks that might prevent the project objectives from being achieved? Were there proposed measures that address these risks at the time of project implementation?**

Secretariat Comment at CEO Endorsement Request  
**Item cleared.**

**FB: 10/21/21**

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**FB, 10/15/21:**

1. the summary of the several features have been integrated in the project design to deal with climate risks is useful, and it should be included in the CEO ER. We recommend including a summary of the bullet list provided below in Table 5, under the section of the CEO ER titled "Risks to Achieving the Project Objectives", so that all information on how the project mitigate climate risk is consolidated in one place.

2. cleared.

3. Cleared.

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**FB, 07/15/21:**

The risk catalogue provided is adequate. However:

1.. Please strengthen the analysis of climate risk to the project's implementation and infrastructures, which may be significant if not mitigated, especially considering the climate risks related to the agri-sector, and the links between the project and agriculture processing/productive uses. This analysis should follow the STAP guidance on climate risk screening, available here: [https://www.thegef.org/sites/default/files/council-meeting-documents/EN\\_GEF.STAP\\_.C.56.Inf\\_.03\\_STAP%20guidance%20on%20climate%20risk%20screening.pdf](https://www.thegef.org/sites/default/files/council-meeting-documents/EN_GEF.STAP_.C.56.Inf_.03_STAP%20guidance%20on%20climate%20risk%20screening.pdf)

2. Please provide a consolidated account of risks and opportunities from COVID 19 in a consolidated section.

3. Please elaborate on how the risk to revert to diesel operated gensets after the commissioning of the plant will be accounted for and mitigated.

### Agency Response

C.O. 10/20/21

1. We have amended the risk related to climate change in Table 5 of the CEO ER to better reflect the features that have been integrated in the project design to address climate risks (see text highlighted in green).

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C.O. 10/07/21

1. Climate risk ? Although not explicitly stated in the CEO ER and the project document, the climate risk analysis did use the STAP guidance on climate risk screening to rate the climate risk associated with the Nigeria child project as being Moderate. However, two important points need to be noted here, as they underline the climate risk mitigation approaches that have been adopted at project design. First, the climate risk assessment has relied on existing vulnerability assessments of the impacts of climate change on agriculture in Nigeria ? footnote 60 in the CEO ER (J. Ajetomobi, O. Ajakaiye and A. Gbadegesin. 2015. The Potential Impact of Climate Change on Nigerian Agriculture: AGRODEP Working Paper 0016). Second, the published literature on vulnerability assessments in agriculture is for current climatic changes. The PPG did not carry out any new vulnerability assessments in the agriculture sector for the simple reason that the Tier 1 and Tier 2 value chains that will be electrified using solar PV-battery minigrids will vary with geography and crops. Since the agricultural value chains that have been mapped for electrification span a diverse geographical area and cover multiple crops, and since the exact project sites for pilots will be identified at project start (paragraph 60 in the CEO ER), a number of features have been integrated in the project design to deal with climate risks:
  - ? - First, the development of ESMP and ESIA using the guidance contained in the ESMF (Annex 10 to the project document) will be carried out for pilots under Activity 1.1.4. All risks identified in the SESP (Annex 6 to the project document), including current and future climate impacts on agricultural crops will be carried out. Text has been added under Activity 1.1.4 to this effect. Specific reference to future climate impacts has been made to address the gap in the baseline study referenced in footnote 60 in the CEO ER;
  - ? - As summarized in paragraph 39 in the CEO ER, Output 2.3 will include GIS information on the current and future impacts of climate change and climate variability on agricultural productivity in different agro-ecological zones and covering different

crops. Likewise, market intelligence under Output 2.3 will also be generated related to the historical and current impacts of climate change in agricultural value chains. The creditworthiness of agricultural end users will also be collected, including their income vulnerabilities due to current and future climate change. In this way, the pipeline of investible assets within the agriculture-energy nexus will be climate-proofed. The corresponding text is found in paragraph 39 in the CEO ER;

- ? - Also, financial derisking instruments will be developed and tested under Output 2.2 to climate-proof the financial viability of minigrids against climate impacts in agricultural value chains. This body of work will be coordinated under the aegis of the Financial Advisory Committee (FAC) that will be established under Output 2.1 of the project. The corresponding texts are found in paragraphs 37 and 38 in the CEO ER; and
- ? - One other crucial requirement of the climate risk screening is the institutional anchoring of the risk management. As mentioned in paragraph 18 in the CEO ER, the Nigeria child project is concurrently a child project of the Energizing Agriculture Programme (EAP) that is being spearheaded by the REA and the Federal Ministry of Agriculture and Rural Development (FMARD). This is the reason why the FAC that will be established under Output 2.1 will have these two institutions as Chair and Co-chair, respectively. The institutional mandate of climate-proofing the agriculture sector and rural electrification is for FMARD and REA, respectively. Because of the energy-agriculture nexus proposed in the Nigeria child project, the sector risks are co-joined. Hence, climate proofing the commercial viability of solar PV-battery minigrids embedded in agriculture value chain falls under the responsibilities of both the REA and FMARD, and hence the FAC. Finally, it is important to note the presence of both institutions on the Project Steering Committee (Figure 5 in the CEO ER).

3. New paragraphs 66 and 67 dedicated to COVID 19 risks and opportunities have been included in Section 5 ? Risks in the CEO ER. Following the guidance of GEFSEC, please note that former paragraph 52 on ?Post-COVID economic recovery? has been repositioned as paragraph 67 in Section 5.

4. The issue related to the risk of reverting to diesel-operated generators has also been raised by STAP. The response to this specific STAP query given below is equally applicable here. Reference to new text additions in the CEO ER is also given in the response to the STAP query.

#### **Coordination**

**Is the institutional arrangement for project implementation fully described? Is there an elaboration on possible coordination with relevant GEF-financed projects and other bilateral/multilateral initiatives in the project area?**

Secretariat Comment at CEO Endorsement Request

**Item cleared.**

FB, 07/15/21: the institutional arrangements are adequate.

Agency Response

**Consistency with National Priorities**

**Has the project described the alignment of the project with identified national strategies and plans or reports and assessments under the relevant conventions?**

Secretariat Comment at CEO Endorsement Request

**item cleared.**

FB, 07/15/21: the project is well aligned with national priorities and the 2017 country's NDC.

Agency Response

**Knowledge Management**

**Is the proposed Knowledge Management Approach for the project adequately elaborated with a timeline and a set of deliverables?**

Secretariat Comment at CEO Endorsement Request

**item cleared.**

FB, 07/15/21: the KM approach seems adequate for this child project of the AMP. It will also include a replication and scaling up strategy.

It also includes a good bi-lateral information exchange protocol with the AMP Regional Child Project.

Agency Response

**Monitoring and Evaluation**

Does the project include a budgeted M&E Plan that monitors and measures results with indicators and targets?

Secretariat Comment at CEO Endorsement Request  
 ITEM CLEARED, FB - 11//5/2021

PPO Comment, 10/26/2021:

1. The M&E budget under section 9 of the Portal entry shows a total budget of \$174,530 while the M&E column in the budget table under Annex E show zero M&E budget.

Please amend:

- M&E budget:

Table 7. Project M&E Plan.

Monitoring and Evaluation Plan and Budget:		
This M&E plan and budget provides a breakdown of costs for M&E activities to be led by the Project Management Unit during project implementation. These costs are included in Component 3 of the Results Framework and TBWP. For ease of reporting M&E costs, please include all costs reported in the M&E plan under the one technical component. The oversight and participation of the UNDP Country Office/Regional technical advisors/HQ Units are not included as these are covered by the GEF Fee.		
GEF M&E requirements	Indicative costs (US\$)	Time frame
Inception Workshop	5,000	Within 60 days of CEO endorsement of this project.
Inception Report	None	Within 90 days of CEO endorsement of this project.
M&E of GEF core indicators and project results framework	21,000	Annually and at mid-point and closure..
GEF Project Implementation Report (PIR)	None <i>[Covered by the salary of the Project Manager]</i>	Annually typically between June-August
Monitoring of SES, gender action plan, and stakeholder engagement plan (project risks)	49,000	On-going
Supervision missions	None	Annually
Independent Mid-term Review (MTR)	42,160	01 February 2024
Independent Terminal Evaluation (TE)	57,370	01 November 2023
TOTAL indicative COST (2.96% of GEF grant)	174,530	

- Budget table:

Other Operating Costs	An independent financial audit of the project will take place for USD 4,001 per year.						16,004	1,6004	Rural Electrification Agency
Grand Total		3,660,426	1,065,861	897,567	5,623,854		281,192	5,905,046	

item cleared.

FB, 07/15/21: yes, the project includes a budgeted M&E plan (table 7).

Agency Response

C.O. 11/1/2021

The M&E budget has been added in the GEF budget table.

#### Benefits

**Are the socioeconomic benefits at the national and local levels sufficiently described resulting from the project? Is there an elaboration on how these benefits translate in supporting the achievement of GEBs or adaptation benefits?**

Secretariat Comment at CEO Endorsement Request

**Item cleared.**

**FB, 07/15/21:**

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**FB, 07/15/21:**

yes, description of socio-economic co-benefits is provided throughout the document, especially in connection with private sector development, integration of productive uses and agroprocessing development and gender aspects.

this section seems to have a typo in: "REA's plan of deploying 3.25 MW of solar PV by 2030".

Agency Response

C.O. 10/07/21

Thank you for pointing this out. Indeed, this is a mistake that has been corrected with the appropriate value of 3.25 GW of solar PV by 2030. It is worthy to note here that this target has been used to estimate post-project market development of solar PV minigrids in Nigeria (as discussed above in relation to indirect GHG emissions reductions).

#### Annexes

**Are all the required annexes attached and adequately responded to?**

Secretariat Comment at CEO Endorsement Request

**ITEM CLEARED, FB - 11//5/2021**

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**PPO Comment, 10/26/2021:**

Office supplies for PMU are charged to project components ? they have to be charged to PMC ? Agency is kindly requested to amend this.

Office Supplies	USD 13,250 in year 1. In order to support the successful implementation of the Outcome 1 activities, the PMU will have an annual budget for operating the project secretariat. In this case, annual estimates are: USD 1,300 for each of year 1 and year 2; and USD 1,500 for each of year 3 and year 4.	5,600	5,600	5,600	5,600	5,600	Rural Electrification Agency
Office Supplies	In order to support the successful implementation of the Outcome 2 activities, the PMU will have an annual budget for operating the project secretariat. In this case, annual estimates are: USD 2,200 for each of year 1 and year 2; and USD 2,300 for each of year 3 and year 4.	9,520	9,520	9,520	9,520	9,520	Rural Electrification Agency
Office Supplies	In order to support the successful implementation of the Outcome 3 activities, the PMU will have an annual budget for operating the project secretariat. In this case, annual estimates are: USD 900 for each of year 1 and year 2; and USD 1,000 for each of year 3 and year 4.	3,800	3,800	3,800	3,800	3,800	Rural Electrification Agency

**Item cleared.**

**FB: 10/21/21**

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**FB: 10/15/21:**

1. The budget was not included in the body of the CEO ER document in the portal, in addition to it being uploaded as separate annex. We need all key documents to be included in the CEO ER document version that will be circulated to Council as we do not circulate annexes.

2. Same as above for the TOC diagram: please include it in the body of the CEO ER document in the portal, for the same reasons highlighted in #1 above.

3. cleared.

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**FB: 07/15/21:**

1. Please include the detailed budget as per GEF template;



2. Please include a theory of change
3. Please confirm that the SESP has been signed by the relevant authority within UNDP and provide a signed copy.

#### Agency Response

C.O. 11/01/2021

This has been revised and all office supplies are now charged to PMC.

C.O. 10/20/21

1. We are facing some technical challenges uploading the budget in GEF format into the portal. We will include it again but please note that we are also providing the budget in GEF format as separate Word file for your consideration, in case there are still formatting issue with the portal entry. We apologize for the inconvenience.
2. The TOC diagram has been included as Figure 1 in the body of the CEO ER.

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C.O. 10/07/21

1. The budget in the standard GEF format as per GEF policy guidelines is provided in Annex 2 to the project document.
2. The Theory of change is provided in Annex 1 to the project document.
3. The SESP should be signed at Local Project Appraisal Committee (LPAC) stage as per [UNDP guidance on the SESP](#).

#### **Project Results Framework**

Secretariat Comment at CEO Endorsement Request

**Item cleared.**

**FB, 07/15/21:**

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**FB: 07/15/21:**

A PRF is provided.

1. For the proposed indicator 10, please clarify how the causal link between "project supported intelligence" and investable solar PV will be established. In other words, how will it be determined that "investable solar PV assets" will developed thanks to the project?

Agency Response

C.O. 10/07/21

Indicator 10 in the Results Framework is provided to assess the level of technical assistance provided under Output 2.4 (Feasibility study support provided to minigrid developers, creating a pipeline of investible assets). The level of technical assistance is measured in equivalent terms of installed capacity of solar PV minigrids in feasibility studies. Hence, there is a direct link with project supported technical assistance under Outputs 2.4 and the total installed solar PV capacity in feasibility studies or investible solar PV assets. So the cumulative solar PV capacity in feasibility studies will be used to measure the size of investible solar PV assets. It is to note that Output 2.4 will be informed by the GIS-based modeling of agricultural value chains and locations suitable for solar PV minigrids determined as part of Output 2.3.

A word of caution is provided here. Although some of the investible assets can be funded using GEF INV, no conclusion is made that ALL of the identified pipeline of investible assets will necessarily be funded subsequently during the project lifetime.

**GEF Secretariat comments**

Secretariat Comment at CEO Endorsement Request N/A

Agency Response

**Council comments**

Secretariat Comment at CEO Endorsement Request

**Item cleared.**

**FB, 10/15/21.**

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**FB, 07/15/21:**

Please include a table listing all comments provided by Council at PFD approval stage. For those not relevant to this child project, please clearly indicate so. Council comments are available here:

[https://www.thegef.org/sites/default/files/work-program-documents/GEF\\_C.57\\_compilation\\_council\\_comments.pdf](https://www.thegef.org/sites/default/files/work-program-documents/GEF_C.57_compilation_council_comments.pdf)

Agency Response

C.O. 10/07/21

Please see Annex B in the CEO ER, which lists Council member comments and responses.

**STAP comments**

Secretariat Comment at CEO Endorsement Request

**Item cleared.**

**FB: 10/15/21:**

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**FB: 07/15/21:**

Please address STAP comments provided at the PFD stage, in particular:

1. The proposal presents an adequate list of stakeholders. However, the diesel generator industry is quite widespread in Africa and the project proponents need to consider how to ensure that they do not hinder project success. The project also needs to consider incentives for alternative livelihoods for people involved in diesel generator business.
2. What are the backups to prevent diesel generators from still being frequently used.

Agency Response

C.O. 10/07/21

Please see Annex B in the CEO ER, which lists STAP comments and responses. Regarding these specific comments, the following can be said on Nigeria:

1. This is a very good observation, and it has been a key consideration in the Nigeria child project design. First, it is pointed out that all GEF INV will be in greenfield projects and will be solar PV-battery minigrids as modelled in Annex 17. There are two types of pilots that will be considered, and these are Tier 1 and Tier 2 agricultural activities using the typology given in the feasibility study summarized in Annex 13. Tier 2 activities are not mechanized but that can be electrified. Since these activities are carried out manually and comprising predominantly a women workforce, they are not expected to be mechanized in the project lifetime. Hence, electrification of Tier 2 value chains does not pose a threat to job losses in the diesel generator business. Nevertheless, there can be loss of manual jobs by women and this has been addressed in the Gender Analysis and Gender Action Plan (Annex 11 to the Project Document). Please note that the 'Risk on women' is captured in the SESP given in Annex 6 to the Project Document.

The issue raised by GEFSec is more relevant for Tier 1 agricultural activities that already contain fossil fuel-powered equipment. Since the equipment already exist in the baseline, any impact on the diesel generator business will be mainly felt at the time when the diesel generators would need replacement. This risk is duly captured in the SESP (Risk 16 in Annex 6 to the Project Document), and will be addressed during implementation through the development of a Environmental and Social Management Plan (ESMP) following the ESMF in Annex 10 to the Project Document. The development of the ESMP is captured under Activity 1.1.4 of Output 1.1 in the CEO ER. Additional text has been added to also cover the risks of job losses in baseline value chains.

An even bigger impact on the diesel generator business can be expected to take at scaling up. A replication (and investment) plan to scale up Solar PV-battery minigrids in agricultural value chains is planned under Output 3.5. Additional text has been added to Activity 3.5.2 to make it explicit that the replication plan for scaling up the project results will have to consider and address detrimental impacts on the diesel generator business.

2. The risk of overestimating GHG emissions reductions has been identified as a risk in the SESP (Annex 6 to the project document). First, as mentioned above, the Nigeria child project will only promote solar PV-battery minigrids and not diesel-solar PV hybrid minigrids. Several factors will act to minimize the risk of frequent use of diesel generators based on the project design and conceptualization. First, and most important, is the fact that the feasibility study given in Annex 13 of the project document has shown cost savings by farmers by the electrification of Tier 1 agricultural activities. The pilots planned under Output 1.1 of the project will serve to validate this empirically and use the knowledge to carry out training and outreach

sessions on the socioeconomic and environmental benefits of solar PV-battery minigrids among farmers as part of activities planned under Output 2.3. Additional text has been added under Output 2.3 to this effect. It is also pointed out that the derisking instruments identified in Annex 17 will also act to increase the affordability of solar PV-battery electricity. Hence, the technical assistance of the GEF can be seen as contributing to this effort. Importantly, financial derisking instruments will be identified and implemented (not using GEF INV) under Output 2.2. The financial analyses contained in Annexes 13 and 17 to the project document show that the use of diesel generators may not be financially favourable.

However, as captured in the causal loop diagram shown in Figure 3 in the project document, there is a positive feedback loop between electricity access and the stimulation of new electricity demand. This is where the use of diesel generators can take place over-and-above the use of solar PV-battery generated electricity. So second, and equally important, is the responsibility of solar PV-battery minigrid developers to remain attentive to the changing needs of productive energy users. For this, the regional project will support the Nigeria child project to develop a Minigrid Pilot Plan under Output 1.1. Among others, the Minigrid Pilot Plan will address the issue of the changing needs (especially any increase electricity needs in this case) of productive end users in the design and sizing of minigrids by proposing novel design approaches based on modularity. Additional text has been added under Output 1.1 to this effect.

**Convention Secretariat comments**

Secretariat Comment at CEO Endorsement Request N/A

Agency Response

**Other Agencies comments**

Secretariat Comment at CEO Endorsement Request N/A

Agency Response

**CSOs comments**

Secretariat Comment at CEO Endorsement Request N/A

Agency Response

**Status of PPG utilization**

Secretariat Comment at CEO Endorsement Request  
**item cleared.**

Please see comments on PPG resources utilization status update provided above.

Agency Response

**Project maps and coordinates**

Secretariat Comment at CEO Endorsement Request  
**item cleared.**

Pls see comments on maps and coordinates provided above.

Agency Response

**Does the termsheet in Annex F provide finalized financial terms and conditions? Does the termsheet and financial structure address concerns raised at PIF stage and that were pending to be resolved ahead of CEO endorsement? (For NGI Only)**

Secretariat Comment at CEO Endorsement Request

N/A

Agency Response

**Do the Reflow Table Annex G and the Trustee Excel Sheet for reflows provide accurate reflow expectations of the project submitted? Assumptions for Reflows can be submitted to explain expected reflows. (For NGI Only)**

Secretariat Comment at CEO Endorsement Request N/A

Agency Response

**Did the agency Annex H provided with information to assess the Agency Capacity to generate and manage reflows? (For NGI Only)**

Secretariat Comment at CEO Endorsement Request N/A

Agency Response

**GEFSEC DECISION**

**RECOMMENDATION**

**Is CEO endorsement recommended? (applies only to projects and child projects)**

**Secretariat Comment at CEO Endorsement Request**

FB, 10/21/21: Project recommended for technical clearance.

FB, 10/15/21: Not yet - Agency is required to address the comments provided and resubmit.

FB, 07/15/21: Not yet - Agency is required to address the comments provided and resubmit.

**Review Dates**

	<b>Secretariat Comment at CEO Endorsement</b>	<b>Response to Secretariat comments</b>
<b>First Review</b>	<b>7/14/2021</b>	
<b>Additional Review (as necessary)</b>	<b>10/15/2021</b>	
<b>Additional Review (as necessary)</b>	<b>10/25/2021</b>	
<b>Additional Review (as necessary)</b>	<b>11/5/2021</b>	
<b>Additional Review (as necessary)</b>		

**CEO Recommendation**

**Brief reasoning for CEO Recommendations**

**CEO MEMO:**

With a population in excess of 200 million, Nigeria is the most populous country in Africa. Nearly 87 million Nigerians are underserved or unconnected to the grid due to the poor quality of grid power and low electrification rates. Given the slow pace of growth of utility-scale power generation, the use of decentralized solar technologies and minigrids has emerged as a strong strategic option for expanding energy access and supporting climate mitigation efforts. Despite significant progress in establishing a clear policy and regulatory framework, and increased investments in minigrids, uneven enforcement and implementation has led to poor clarity among potential investors, limiting investor ability to benefit from it. In addition customers' credit risk and inability to pay for cost-recovery tariffs further hinders investors confidence. The project

adopts a systemic approach to increasing electricity access in off-grid communities using solar PV minigrids. It will support the scaling up of private investments through the deployment of innovative business models and financing with focus on achieving cost reductions in solar PV minigrids. The overall objective is to increase the commercial competitiveness of solar PV minigrids through their integration in the agricultural value chain; increase the affordability of renewable electricity for end users, thereby reducing reliance on the baseline technology (i.e. diesel minigrids). To support this objective, the project is structured in three components:

- Component 1: Business Model Innovation with Private Sector. This component centers on providing a combination of financial support and technical assistance for embedding low-carbon minigrids into the agriculture value chain.
- Component 2: Scaled-up financing. This component will focus on transferring residual risks and barriers that cannot be fully mitigated under the first component and thus involves close collaboration and coordination with existing public and private financial actors, financing initiatives and future partners.
- Component 3: Digital, Knowledge management, monitoring and evaluation and scale-up strategy. The third component addresses outreach, capturing and dissemination of results for scaling up solar PV minigrids. It also seeks to ensure adequate monitoring and evaluation of the project. Emphasis is placed on the use of digital technology and platform as an enabler of learning on all aspects of minigrid delivery model and business model, which in turn squarely support knowledge management and approaches for scaling up solar PV minigrids based on cost reduction levers.
- There are strong linkages with the AMP Regional Child Project across all project components, in particular with the Regional Project Component 2, which will provide access to a variety of dedicated technical and operational support. Through a combination of policy and investment activities, the project is expected to impact more than 70,000 beneficiaries, and to result in 4,170,960 tons in emission reductions.