



# Promoting Carbon Reduction Through Energy Efficiency (EE) Techniques in Baghdad City

Review CEO Endorsement and Make a recommendation

## Basic project information

**GEF ID**

10392

**Countries**

Iraq

**Project Name**

Promoting Carbon Reduction Through Energy Efficiency (EE) Techniques in Baghdad City

**Agencies**

UNDP

**Date received by PM**

6/8/2021

**Review completed by PM**

10/26/2021

**Program Manager**

Ming Yang

**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  
6/10/2021 MY:

Yes. The project is still aligned with the GEF CCM focal area objectives.

11/3/2021 MY:

Please address the following comments from the GEF PPO Unit:

On October 29, the GEF PPO made the following comments:

Project to be returned to the Agency due to:

1. There is one dollar difference between the GEF Financing approved at PIF (\$3,092,009) compared with the GEF Financing at CEO Endorsement (\$3,092,008) ? please amend in all the Tables (A, B and D).
2. On Executing arrangements: We did not see the Letter of Support from the OFP. Please provide the letter at the GEF Portal.
3. On co-financing: the co-financing from BRESC cannot be considered as

Grant. By reading the description if the co-financing will be provided in the form of retrofitting buildings, technical support and public awareness then perhaps Public Investment should be the more appropriate category for this kind of co-financing.

4. On M&E: There is a discrepancy between M&E Budgets from the M&E Section and the overall budget (please see below). Kindly request the agency to correct the M&E Budget in the overall budget table. It seems there is an error there since it represents almost 10% (\$385,000) of the overall budget.

5. On Comments from Council Members: The Comment from the US does not match what the Council Member wrote on the Stakeholder Comments section. We would kindly request the agency to copy/paste comments from Council Members exactly as they have been provided and the answer accordingly.

In the new submission, we could not find any responses of the UNDP to the above comments. Please see and address the comments of the PPO dated November 3:

1. Still there is one dollar difference between the GEF Financing approved at PIF (\$3,092,009) compared with the GEF Financing at CEO Endorsement (\$3,092,008) ? please amend in all the Tables (A, B and D) with the amount approved at PIF stage (\$3,092,009).

2. In the GEF Portal, we couldn't find the letter of the OFP to support UNDP's execution functions for the project. Please upload the letter to the GEF Portal.

3. Co-financing: Addressed.

4. Still there is a discrepancy between the column 'M&E' in the budget table (\$385,000) and the M&E budgeted plan in Section 9 (\$155,000) ? please amend it.

5. Council Comments: not addressed ? the comments from the US council member still are edited by the Agency ? please amend it.

11/17/2021 MY:

Yes, comments were addressed.

Agency Response

**November 17:**

1. The one dollar difference was fixed. In Component 3: TA for Outcome 5 (5.1) of CEO ER has been increased from 689,770 to 689,771 and the total amount has been updated with the final project budget of \$3,092,009.

2. As per the request of GEF PPO, a support letter for direct execution by UNDP was obtained from the GEF OFP. This is now attached as Annex I to the CEO ER document.

3. Not applicable as per PPO comment.

4. The budget under Component 4 of Total Budget and Work Plan in the ProDoc has been divided into two subcategories; KM and M&E to demonstrate M&E as a unique unit with total of \$155,000. To be in line with this change, GEF Budget Table has been revised. The M&E column now has the same amount of \$155,000.

5. The Annex B was revised in response to the PPO comment. Now, responses were provided for the US Council Member comments.

Additionally, earlier the following GEF Secretariat comment was received on 10/5/2021:

*1. In order to fully address the German comment, the UNDP must select at least one public building such as a public library, a public school, or a public hospital for EE policy and technology demonstration, in addition to the selected Energy Efficiency Center. The selection of the public building should be completed before CEO endorsement. The Program Manager (PM) of this project in the GEF cannot recommend the project to the CEO for project endorsement until the selection is completed. Given that the deadline of CEO endorsement of the project is December 12, 2021, the PM can recommend the clearance of the project with a condition: "The UNDP will work on the selection of the public building and finalize the selection by November 18, 2021". In the meantime, when other comments are cleared, the project can be processed for Council Review which will last 4 weeks. Please respond this comment and confirm UNDP's capability to do so. Thank you.*

In response to this comment, UNDP Iraq consulted with the Government of Iraq, and it was decided to select a building of Ministry of Education, a training center in Baghdad, as the second demonstration building for the Project. This was already reflected in the project documents and strategy. Now, UNDP secured a support letter from the Ministry of Education indicating their will and approval of this selection. **The Support Letter is now attached to the CEO ER as Annex J.**

**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

6/10/2021 MY:

Not at this time.

The project scope, structure and design have been changed. Some of the changes such as the removal of energy efficiency improvement in appliances and equipment have not been justified.

In addition to building design, construction and retrofitting are of course very important, but improving energy efficiency in appliances and equipment is also very important in the building sector to significantly reduce GHG emissions. In Iraq, many households are using window mounted air conditioners in summer and using kerosene heaters in winter for heating. Energy efficiency standards and codes for appliances and equipment are necessary to improve energy efficiency in the residential sector in the country. Please justify why these activities were removed from the PIF..

Similarly, removing solar components is not justified. Why the output of "equipping national laboratories with testing facilities for solar" is removed? If there is no satisfactory justification, please put the sub-component back.

For all the changes or revisions, please justify the changes with convincing arguments and evidence.

In Component 2, please indicate the number of buildings and total square meters of these buildings that will be retrofitted under the GEF project support. Please take into account the last bullet of comments of the German Council member to select a number of public buildings such as public libraries, schools and hospitals to demonstrate EE retrofitting during the implementation period of the GEF project. The implementation period only lasts a few years, but NOT the lifetime of the GEF project which may be 10 years or 20 years.

Please make sure the co-financing from the Baghdad Renewable Energy and Sustainability Center (BRESC) is efficiently and effectively used in these buildings.

For Project Management Cost (PMC), to comply with the GEF policy, please revise the amounts from GEF (\$147,238) and co-financing (\$14,000) to make the ratios (\$147,238/\$2,944,779 \$14,000/\$27,296,000) more or less identical.

For Component 3, please elaborate the number of training workshops to conduct and the total numbers of people to be trained directly under the GEF project.

For Component 4, the budget seems to very high. Please consider reallocating some of the budget to Component 2 (INV). Please split the GEF budget to match the outputs of 7.1 and 8.1. More comments may come after it is done.

10/5/2021 MY:

Not completed at this time. Please continue addressing the remaining comments:

1. In order to fully address the German comment, the UNDP must select at least one public building such as a public library, a public school, or a public hospital for EE policy and technology demonstration, in addition to the selected Energy Efficiency Center. The selection of the public building should be completed before CEO endorsement. The Program Manager (PM) of this project in the GEF cannot recommend the project to the CEO for project endorsement until the selection is completed. Given that the deadline of CEO endorsement of the project is December 12, 2021, the PM can recommend the clearance of the project with a condition: "The UNDP will work on the selection of the public building and finalize the selection by November 18, 2021". In the meantime, when other comments are cleared, the project can be processed for Council Review which will last 4 weeks. Please respond this comment and confirm UNDP's capability to do so. Thank you.

2. In TABLE B ( **Project description summary**) for Component 3, please elaborate the number of training workshops to conduct and the total numbers of people to be trained directly under the GEF project. These numbers may include "600 participants filling surveys, including 150 persons receiving ToT certification, with evidence showing that the results from previous surveys are studied and taken in consideration in planning new activities (50% men and 50% women). Minimum of 8 workshops/events" etc. Please check other outputs, if there are any quantitative numbers missing, please add them.

10/26/2021 MY:

Yes, comments were addressed.

## Agency Response

**26/10/2021:**

1. In the original CEO ER submission, there was only one building (the EEC building) planned to be retrofitted using GEF funds. This has now been changed to become 2 buildings. As per the consultations of UNDP Iraq with the Government officials, we have preliminarily identified a second building: a Training Center of Ministry of Education (MoEdu). UNDP will continue working to formalize this selection by

November 18, 2021, which may entail a further round of edits to the CEO ER and prodoc, primarily with regard to co-financing and a potential annex.

Although the main mandate of the Training Center is to train the staff of the MoEdu, further public awareness events on EE will be undertaken during the project duration. Moreover, the trainees on other subjects will have the chance to be exposed to EE retrofitting practices. UNDP will coordinate with MoEdu to allocate a session on EE benefits within all training courses conducted within the Training Center.

The following text has been added to the CEO ER and prodoc under the description of Component 2 (Part II, Section 3):

The building selected for EEC establishment will be retrofitted as part of project piloting to showcase the benefits of adopting EE measures in the buildings sector. During the project review by GEFSEC, it was decided to add a second public building to the project piloting activities. The second pilot building will be one of the Training Centers under the umbrella of Ministry of Education (MoEdu) located in Baghdad.

The following text has been added to Outcome 3 description to reflect this change:

During project review, the project modified the demonstration commitment to include a second public building to be retrofitted using GEF funds. This second building will be a Training Center under the umbrella of MoEdu located in Baghdad, noting that it will be a public building with a surface area of about 500 square meters.

2. Information on number of trainings and total number of people were added to the Table B (Outputs 3.2, 4.1, 4.2, 5.2, and 6.1.). Besides, additional text has been added to the Component 3 text in CEO ER, indicating the number of participants and workshops.

Additionally, indicator 8 under Component 2 has been updated as follows (see CEO ER Annex B, and ProDoc Section V and Annex 5):

Indicator 8: EEC is operational in a building that has been retrofitted, and run by staff capable of providing the services in its mandate

Mid-term: The legal establishment of EEC is finalized, retrofitting of the building is completed, and key staff hired with clear job descriptions.

End of project: EEC is fully operational, with 40 trained staff (50% men and 50% women) and evidence of effectiveness in the buildings sector in Iraq, including sound management of all ongoing activities under this project. Minimum of 4 workshops.

Previous comments:

GEF SEC: The project scope, structure and design have been changed. Some of the changes such as the removal of energy efficiency improvement in appliances and equipment have not been justified.

In addition to building design, construction and retrofitting are of course very important, but improving energy efficiency in appliances and equipment is also very important in the building sector to significantly reduce GHG emissions. In Iraq, many households are using window mounted air conditioners in summer and using kerosene heaters in winter for heating. Energy efficiency standards and codes for appliances and equipment are necessary to improve energy efficiency in the residential sector in the country. Please justify why these activities were removed from the PIF.

Similarly, removing solar components is not justified. Why the output of "equipping national laboratories with testing facilities for solar" is removed? If there is no satisfactory justification, please put the sub-component back.

For all the changes or revisions, please justify the changes with convincing arguments and evidence.

The following justifications have been added to the CEO ER (Part II, Summary of Changes table):

**Justifying the removal of EE in appliances from the project text:**

In the project's PIF, there were no activities included in any project outcome or output to improve EE in appliances. Reference to appliances was made broadly as part of the discussion on country challenges, but the baseline for appliances was not extensively studied during PIF development.

To align the ProDoc/CEO ER sections with its results framework, we investigated the usefulness of adding new outcomes/outputs to address EE in appliances. We identified the following key challenges:

- 1- Whereas building codes is the responsibility of the Ministry of Construction, the line ministry for appliances is the Ministry of Planning. Hence, combining both goals under the same project is challenging from a project management perspective and jeopardizes the ability to achieve tangible results in the area of institutional capacity building.
- 2- EE in buildings focuses on national codes and working with local parties from the public and private sector to adopt EE designs and material. For appliances, the engagement on the national will be mostly be with consumers, since the majority of appliances in the market are imported. As above, combining top-down and bottom-up approaches in two developmental areas was considered to increase the risk of project success.
- 3- Furthermore, the Central Organization for Standardization and Quality Control has already identified standards on several equipment, such as refrigerators, ACs etc. Although this process is not complete in Iraq for all appliances, but it is ongoing work



which the project can engage with during implementation without the need for introducing additional outcomes/outputs under this new project.

As a result of the baseline assessment and after further discussions with stakeholders during the consultation workshop conducted on June 10th 2020, reference to appliances was not included in the project description and the focus of outcomes and outputs was maintained on EE in buildings as proposed in the PIF.

**Justifying the removal of Output 3.4: Upgrade, enhance and certify one national testing laboratory and equip the laboratory with testing facilities for solar equipment:**

During PPG development, the baseline for solar equipment testing was studied indicating the following developments:

1- A solar PV lab station was provided to the Ministry of Science and Technology with measurement devices and software under the previous GEF-financed project titled Catalyzing the Use of Solar Photovoltaic Energy Project (PIMS 5137, GEF ID: 5063). This project has been implemented between 2014 to 2019. The lab measures the metrological conditions surrounding the solar panel such as temperature, humidity, dust etc. In addition, the solar panel temperature and electricity generation are measured for different technologies and angles.

2- Al Mansour Factory (which is the only governmental factory assembling solar panels) has a "Solar flash test" for its panels and are the only entity authorized by the Standard and Quality Assurance Organization. The system measures the output performance of a solar PV module using a standard testing procedure at manufacturers to ensure the conforming operability of each PV module.

Hence, the output on solar equipment testing was removed from the project results framework, enhancing the project's focus on improving EE in buildings.

GEF SEC: In Component 2, please indicate the number of buildings and total square meters of these buildings that will be retrofitted under the GEF project support. Please take into account the last bullet of comments of the German Council member to select a number of public buildings such as public libraries, schools and hospitals to demonstrate EE retrofitting during the implementation period of the GEF project. The implementation period only lasts a few years, but NOT the lifetime of the GEF project which may be 10 years or 20 years.

Please make sure the co-financing from the Baghdad Renewable Energy and Sustainability Center (BRESC) is efficiently and effectively used in these buildings.

In the submitted CEO ER, there was only one building (the EEC building) planned to be retrofitted using GEF funds. This has now been changed to become 2 buildings. The following text has been added to the CEO ER under the description of Component 2 (Part II, Section 3):

The building selected for EEC establishment will be retrofitted as part of project piloting to showcase the benefits of adopting EE measures in the buildings sector. During the

project review by GEFSEC, a second public building was added to the project piloting activities, where the UNDP CO will consult with national parties during the project inception to identify its exact location.

Furthermore, the description of the building selected to become the location for EEC is provided in the CEO ER under the description for Outcome 3 (Part II, Section 3), as well as in an additional annex to the CEO ER (Annex H). Text under Outcome 3 has been modified to provide additional information such that it presently states that:

? Ownership: To emphasize the role of the private sector in the deployment of EE measures in the buildings sector in Iraq, national stakeholders proposed that EEC is established as a Public-Private Partnership (PPP) between Baghdad University, the Ministry of Construction, Housing, Municipalities, and Public Works (MoCHPMW) and Baghdad Renewable Energy and Sustainability Center (BRESC), where government co-finance will be provided in the form of providing the building and covering staff salaries, while BRESC will support the operation with technical knowledge and expertise.

? Location: It has been agreed among stakeholders that the EEC will be situated in one of the state-owned buildings within Baghdad University, with an area of about 1,000 square meters. The UNDP CO team conducted a site visit to the proposed location. Please see the newly added Annex H of the CEO ER for more details on the selected building for EEC establishment. During Year 1, an assessment will be conducted to identify the retrofitting activities required for the EEC building, and the second piloting building, for both to become a showcase for best-practice in EE in buildings. This assessment will also be used to develop the detailed Procurement Plan for the project.

? Accessibility: The University of Baghdad (UoB) lies in the heart of Baghdad City and is publicly accessible from most of the main road. Many academic and research institutions is next to UoB. As for most of the public buildings in Iraq some security measures are in place. However, these do not hinder the public from visiting UoB as it is open for the public.

? Funding for establishment (i.e. cost of the retrofitting activities): The establishment funds will be provided by the GEF investment fund, in the form goods, material and services required for undertaking retrofitting activities for EE adoption in the selected premises.

? Funding for administrative costs (i.e. staff salaries): The details of the PPP agreement will be discussed during Year 1 of project implementation, but the preliminary discussions with stakeholders indicate that the operation of EEC will be the responsibility of the Baghdad University. During project implementation, co-finance by the MoHEN will be used to cover staff salaries from various ministries engaged in the project activities, including EEC operation throughout the 5 years of the project. Specific staff salaries working within the EEC (on full time or part time basis), technical operation and building maintenance will be covered by Baghdad University co-finance (see the co-finance letters presented in Annex 13). The PPP will include suitable arrangements for post-project financial and operational arrangements.

In addition, the text under Outcome 3, the term 'project's lifetime' has been changed into 'project implementation' to make the timeline for retrofitting 30 buildings using co-finance clearer.

Furthermore, and in response to GEF comments on GHG reductions and budget allocation, a second public building will be retrofitted using GEF funds (the exact location will be selected during the inception phase). The following text has been added to Outcome 3 description to reflect this change:

During project review, the project modified the demonstration commitment to include a second public building to be retrofitted using GEF funds. During the project inception, the UNDP CO will consult with national partners to identify this pilot building, noting that it will be a public building with a surface area of about 500 square meters.

GEF SEC: For Project Management Cost (PMC), to comply with the GEF policy, please revise the amounts from GEF (\$147,238) and co-financing (\$14,000) to make the ratios (\$147,238/\$2,944,779 \$14,000/\$27,296,000) more or less identical.

In the budget table detailed in the Project Document (Section IX) and the GEF Budget Template in excel, the following values were listed as PMC:

- PMC percentage from GEF funds =  $\$147,238 / \$3,092,008 = 4.76\%$
- PMC percentage from UNDP co-finance =  $\$14,000 / \$300,000 = 4.67\%$

For the co-finance by the Government and private sector (i.e. the co-finance contribution which will not be administered through UNDP accounts), the following amount has been allocated as PMC and reflected in the CEO ER (Part I, Section B):

PMC percentage from co-finance =  $\$1,299,640 / \$27,310,000 = 4.76\%$

GEF SEC: For Component 3, please elaborate the number of training workshops to conduct and the total numbers of people to be trained directly under the GEF project.

In the Project Results Framework table, there are four indicators which include training activities. When developing the mid-term and end of project targets for these indicators, we tried to avoid stating only quantitative targets and developed the indicators in a manner that allow the qualitative assessment of training effectiveness. The following are the indicators with their targets, after adding estimates for the number of workshops:

- **Indicator 9:** Periodical market inspection is conducted using the equipment in the testing facility

Mid-term: Testing equipment purchased and 10 persons trained on using each (50% men and 50% women). Minimum of 1 workshop.

End of project: The first annual inspection report is issued, with recommendations for decision makers and end-users. Minimum of 2 workshops.

- **Indicator 10:** Number of certified Energy Managers and Building Auditors, able to use the adopted MVE procedure to audit EE in buildings, disaggregated by affiliation, age, and gender, provided that certification is issued upon successful completion of the theoretical and practical components of the training

Mid-term: 20 persons, each conducting audits for at least two buildings and issuing reports per the MVE procedure (50% men and 50% women). Minimum of 2 workshops.

End of project: 100 persons, each conducting audits for at least two buildings and issuing reports per the MVE procedure (50% men and 50% women). Minimum of 6 workshops.

- **Indicator 11**: Number of staff trained on the operationalization of the developed Data Flow Diagram (DFD), including data management, public-public and public-private cooperation on EE in buildings (disaggregated by affiliation, age, and gender)

Mid-term: An overarching DFD is developed in consultation with the entities involved in its implementation, including representatives from the private sector

End of project: The DFD is operationalized and 10 persons at each entity included in the chart receive training on its use (30% policy makers and 70% practitioners, as applicable, with 50% men and 50% women). Minimum of 4 workshops.

- **Indicator 12**: Number of participants in training workshops and marketing events, with surveys filled before and after participation to assess the effectiveness of the activities and collect information on how to improve, disaggregated by affiliation, age and gender

Mid-term: 200 participants filling surveys, including 50 persons receiving ToT certification (50% men and 50% women). Minimum of 4 workshops/events.

End of project: 600 participants filling surveys, including 150 persons receiving ToT certification, with evidence showing that the results from previous surveys are studied and taken in consideration in planning new activities (50% men and 50% women). Minimum of 8 workshops/events.

The description of Component 3 in the CEO ER (Section 9) included some information on training delivery. Text under this section has been modified to elaborate on the number of participants and workshops. The section presently states that:

The number of people to be trained under Components 2 and 3 are listed in the mid-term and end of project targets in the results framework table (see Annex A of the CEO ER). The total for all training workshops is estimated to be about 30 persons at mid-term review, with a plan to reach about 150 persons at project end. There is an additional figure of about 600 persons targeted for participation in general training sessions and marketing events by the EEC once operational. The organization of these training will take in consideration diversity aspects and will be used as an opportunity to promote gender equality and women participation in the EE sector. Training workshops and consultation sessions will also take in consideration the involvement of public and private sector actors, in order to provide participants with networking opportunities and ensure the sustainability of the collaboration between different national partners.

It is noted that the implementation of activities under this component will take into account the social distancing recommendations and prioritize the health and safety of trainers and participants in the choice of venue and maximum capacity for attendees. Hence, while training sessions would typically include 25-30 participants, possibly smaller numbers for technical training, the UNDP CO as the project's implementing partner will be open to adding more training rounds as may be needed, in order to reduce the number of participants per round as appropriate to the training venue. On-line

meetings and virtual events will also be utilized to replace in-person meetings whenever possible to reduce the risks associated to COVID-19 on the project's progress and timeline.

GEF SEC: For Component 4, the budget seems to very high. Please consider reallocating some of the budget to Component 2 (INV). Please split the GEF budget to match the outputs of 7.1 and 8.1. More comments may come after it is done.

The budget for Component 4 in the submitted package is \$485,000. This amount includes \$155,000 allocated for undertaking activities to meet GEF M&E requirements (please see the cost breakdown provided in Part II, Section 9 of the CEO ER).

The planned use for the remaining amount (\$330,000) was detailed in the budget notes table as follows (see ProDoc, Section IX):

- \$100,000 to develop an interactive online portal, including data collection strategies through gamification and regular surveys.
- \$150,000 to design project-specific KM and M&E systems, including the identification of the data sets that can be reflective of project achievements, and the associating templates, training manuals, catalogues, GHG inventory, and other tools which will be used by project staff and consultants during the project lifetime.
- \$30,000 to organize stakeholder consultation meetings and capacity building workshops for EEC staff to train them on using the developed KM and M&E systems.
- \$50,000 to conduct exchange missions for national stakeholders to other countries. These visits aim to introduce the national stakeholders to the regional best practices in other countries.

In response to this comment and the review comments on GHG mitigation, the team revisited the budget such that \$100,000 are deducted from Component 4 and added to the investment budget under Component 2 to enable the retrofitting of 2 buildings instead of 1 (EEC building and another public building to be selected during the inception phase). The amount will be used in the purchase of additional goods and material for the 2nd building, while the contract values for service providers will cover the two buildings together.

The following presents the specific changes in the updated budget for Component 4:

- \$70,000 to develop an interactive online portal, including data collection strategies through gamification and regular surveys.
- \$80,000 to design project-specific KM and M&E systems, including the identification of the data sets that can be reflective of project achievements, and the associating templates, training manuals, catalogues, GHG inventory, and other tools which will be used by project staff and consultants during the project lifetime.

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

Secretariat Comment at CEO Endorsement Request

6/10/2021 MY:

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

6/10/2021 MY:

Not completed at this time. It seems that the identified co-financing does not meet the expected co-financing for the project. The following table shows the co-financing to be provided by the Ministry of Environment:

Source of Co-Finance	Name of Co-Finance	Type of Co-Finance	Amount (\$)
Recipient Government	Salaries of (20) Staff of National Technical Team	In kind	1,800,000
Recipient Government	Computers; Stationary; Internet; Communications	In kind	510,000
Recipient Government	Electricity; Rent of Offices	In kind	360,000
Recipient Government	Provision of Cars and Transportation inside Baghdad	In kind	300,000
Recipient Government	Organizing International Consultative Meetings and Workshops	In kind	40,000
<b>Total Co-Financing</b>			3,010,000 Three million ten thousand USD

The GEF is thankful to the government for providing 20 government technical staff at the salary costs of \$1.8 million. This amount of money is approximately the total salary of the 20 staff for five years (calculated at about 26,900,000 Iraqi Dinar per year per person). But the GEF does not think it is appropriate for the GEF/UNDP project to keep 20 full time staff from the government for the implementation of the project. The GEF will provide project management cost (PMC) to the project. The project does not need the government to contribute computers and internet. The GEF Project Management Cost will cover these costs. Also, please elaborate why the project needs the government to contribute \$360,000 for electricity and conference room uses, and

\$300,000 for car uses. Please minimize and split the uses of the government resources put them item by item in the outputs of the components of the project.

The \$1 million in-kind contribution from the Ministry of Higher Education seems not convincing. Firstly, the opportunity cost of the use of the 540 square meter building from 2021-2026 amounts to \$1 million, which is extremely high in the country. After 2026, who will pay for the opportunity costs of the building? How can the government ensure the sustainability of the GEF Project after the the implementation of the project is over? Second, the letter should be signed by someone in the Ministry of Higher Education, the owner of the building.

Per the co-financing letter, the \$23,000,000 of the Baghdad Renewable Energy and Sustainability Center (BRESC) with other private investors is planned to invest in 30 buildings for retrofitting. In the CEO ER document, please show and indicate these 30 buildings that will be retrofitted with the \$23 million investment by the private sector. Please clearly indicate the number of buildings to be retrofitted in Component 2 (INV). The retrofitting of the 30 buildings should be completed in the GEF project implementation period.

10/5/2021 MY:

Yes, comments were addressed, the project document was revised and issues were cleared.

### Agency Response

The two public co-financing letters have been revised to address this comment. The updated versions are provided under Annex 13 of the Project Document.

1. The main co finance letter from the Government of Iraq, signed by the Ministry of Health and Environment: The letter has been revised based on the comments from GEF. The new version dated on 7 July has been added to the Annexes.
2. A new co financing letter dated on the 11 of July from the University of Baghdad (UoB) has been obtained based on the

comments from GEF and has been added to the Annexes. It is an amount of 1 MUSD of 5 years to cover costs:

- Salaries of staff from UoB who are expected to work in the Energy Efficiency Center (EEC) on full time or part time basis to cover the administrative, management and operational needs of the EEC including security.
- Since the building is owned by UoB, the main services such as electricity, water etc. will be covered by the university.
- The land area of the building is more than 540 m2. However, the building consists of two floors with a total area of more than 1000 m2. In addition, the building is the heart of the capital Baghdad were renting costs would have been significantly high.

As also responded above, the text under Outcome 3, the term 'project's lifetime' has been changed into 'project implementation' to make the timeline for retrofitting 30 buildings using co-finance clearer.

#### **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

6/10/2021 MY:

Yes. The country has reserved enough CCM STAR resources for the project.

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

6/10/2021 MY:

Yes. The report is available on page 65.

But please justify why about \$40,000 PPG unused and uncommitted.

10/6/2021 MY:

Yes, comments were addressed.

Agency Response



The following note has been added to Annex C of the CEO ER to justify the unused amount and describe its planned use.

The surplus is the result of shifting most meetings during PPG development into online modalities due to COVID-19 restrictions and the cancellation of the field mission by international consultants. The remaining balance of \$39,513.68 is intended to be used to perform a HACT assessment and host a final event with stakeholders before the end of the year 2021.

#### **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**

6/10/2021 MY:

Not completed at this time. Direct carbon emission reduction target was significantly reduced from 78300 tonnes of CO<sub>2</sub> to 1933 tonnes of CO<sub>2</sub>. Please justify the dramatic reductions. In order to reduce one tonne of CO<sub>2</sub> in buildings with energy efficient technologies and energy efficiency policies in this project, the GEF needs to invest in \$189. This number shows that the project is NOT cost-effective in terms of achieving global environment benefits in the EE area. In the GEF EE portfolio, the average cost of GEF investment for reducing one tonne of CO<sub>2</sub> is about one US dollar. There might be something wrong in GHG accounting. Otherwise, please consider redesigning the project.

10/5/2021 MY:

Not completed yet.

In addition to GHG emission reductions, please indicate the amount of energy savings by the GEF project in the Core Indicators.

10/26/2021 MY:

Yes, comments were addressed.

#### **Agency Response**

**26/10/2021:**

The amount of energy savings has been added to the Core Indicators table in Section E of the CEO ER.

Previous comments:

The main reason for the large difference between PIF and PPG is that the PIF calculation contained an error a by a factor of 1,000. The error has been explained in the CEO ER (pg.17). During PPG development, we used the GEF EE tool populating it with referenced baseline data.

Following a detailed review of the GEF calculation tool (Annex 12) and in response to other review comments, the following changes have been made:

- The first year of project is changed from 2021 to 2022 (please see Project Info sheet, cell D14). Although the project is planned to start during 2021, but the calculation sheet is not sensitive to months? count. Therefore, when stating the start date as 2021 and the end date as 2026, the equations translate the project duration to 6 years instead of 5.
- In the previous calculation sheet (Demo&Diff), we listed the 31 buildings in cell D39 (Number of Retrofitted Buildings Implemented During Project Period). However, when looking again at why the figures could be severely less than in other countries, we took note of D39 value contributing to the calculation of "Indirect Bottom-up Estimates", while direct GHG savings relies primarily on the figure we insert in cell D29 (Annual Electricity Saving). Therefore, we multiplied the equation used in D29 to calculate the MWh savings from retrofitting EEC buildings by the number of buildings listed in cell D39.
- A new building has been added to the retrofitting activities to be undertaken using GEF funds. Therefore, the total number of buildings to be retrofitted during the 5 years? project implementation is now 32 buildings.
- There was an error in the surface area of the EEC building. Hence, the average surface area for the retrofitted buildings has been updated such that the EEC building is 1,000 sq.m while the average area for the remaining 31 buildings is 500 sq.m.
- We also changed the assumption on minimum reduction in building's electricity consumption due to retrofitting from 10% to 50%. This is based on studies provided by the national consultant, indicating that the reduction in electricity consumption for cooling and heating purposes resulting from thermal insulation in buildings is between 54-68%. We applied 50% as a conservative average.

With these changes, the resulting direct emissions is calculated as 531,628 tCO<sub>2</sub>e, while the indirect is 3,978,632 tCO<sub>2</sub>e. The investment component of GEF budget for this project is USD 800,000. Hence, the GEF investment for each one tonne of CO<sub>2</sub>e reduction is USD 1.5, noting that this value does not take into account that (1) a portion of the investment budget will be used to purchase testing equipment, and (2) the TA

funds allocated for contracting consultants and service providers to undertake the retrofitting activities at the two pilot buildings.

The updated sheet is attached as Annex 12 and the modified values are included in the CEO ER.

## **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

6/10/2021 MY:

Not completed.

In the baseline scenario and the proposed alternative scenario, please elaborate the necessities of establishing the energy efficiency center, the retrofitting of 30 buildings for project demonstration, etc. that are associated with the project components. Please revise the CEO ER document accordingly.

10/5/2021 MY:

Not at this time.

Figure 1 is missing in the CEO ER document. Figures start at Figure 2. Please revise the numbers of the Figures.

*Figure 2: Solution Tree Diagram - An outline for problem definition and possible solutions* is similar to Theory of Change. Please revise Figure 2 into Theory of Change according to GEF STAP guidance on

it: [https://www.stagef.org/sites/default/files/2021-02/Theory%20of%20Change%20Primer\\_web.pdf](https://www.stagef.org/sites/default/files/2021-02/Theory%20of%20Change%20Primer_web.pdf)

10/26/2021 MY:

Yes, comments were addressed.

Agency Response

**26/10/2021:**

1. The figures captions and numbers in the CEO ER have been revised.

The ToC diagram is presented in Figure 3 (Section 1a-3 in the CEO ER) in accordance with the GEF guidance for ToC development. Figure 2 (Section 1a-1 in the CEO ER) aims to present the baseline and alternative scenarios in the form of a solution tree. Figure 2 elaborates on how the proposed project idea has been selected, while the ToC in Figure 3 presents the causal chains leading to this specific design for the selected solution.

Previous comments:

Please note that, question 1, 2 and 3 of Part II are responded below:

Figure 1 in the CEO ER (Part II, Section 1a) presents the root causes, problem definition, alternative solutions/scenarios studied during project development which led to the formulation of this project design and the preparation of a proposal for GEF funds. The following text has been added under the figure to elaborate the linkages in response to comments 1,2 and 3 of Part II:

In Iraq, electricity consumption figures indicate that the buildings sector (i.e. residential and governmental buildings) contribute to more than 60% of the electricity consumption nation-wide. This leads to high GHG emissions and a continuously increasing load on the electricity infrastructure, which is already strained due to aging and conflict-related damage. Nevertheless, the need to increase the number of buildings in Iraq is a critical part of the post-war reconstruction effort and a main priority for the Government of Iraq. This project aims to overcome this paradox and delink the increase in the number of buildings from a consequent increase in GHG emissions.

When studying the root causes for the increased GHG in the buildings sector, three issues were identified as the main contributors to the problem:

- 1- Cause (1): Inefficiencies in the power generation capacity and the reliance on fossil fuel for energy production. This is combined with remarkably high records of distribution losses which is also linked to unmetered consumption and inefficiencies in tariff collection from end users. This is a major issue for the Government of Iraq and requires the development of projects to support EE on the supply-side.
- 2- Cause (2): Inefficient appliances dominating the market, leaving consumers with limited options to select from in terms of energy-efficient technologies. However, Iraq does not have a manufacturing capacity. The market for electric appliances relies on imported equipment. The intervention to tackle this root cause requires working with the importation authorities to develop a formula that will enable the enforcement of EE regulations on imported equipment without reducing the attractiveness of the country as a profitable market for international companies and manufactures.
- 3- Cause (3): High electricity consumption in buildings due to the adoption of designs and material that are neither energy-smart nor responsive to the national codes

developed to ensure that buildings in Iraq are adaptive to the environment and resilient to climate change.

Since the causes are diverse and require engaging with different parties with dedicated plans for each, they cannot be all addressed under one project. The UNDP and Ministry of Construction decided to focus on Cause (3) and work towards improving EE in buildings. This is perceived as one of the critical steps required to reduce GHG emissions from the buildings sector, while encouraging the increase in the number of constructions and the enhanced livelihoods for the people residing in these buildings. Furthermore, the focus on EE in buildings is in line with the building-back-better agenda and ensures that new buildings are eco-friendly and more sustainable than traditional constructions. The project component, outcomes and outputs were designed to reflect this approach and ensure the achievement of tangible results at project end by expanding the regulatory framework of EE in buildings, enhancing the management and coordination capacity of the government by establishing a focal point to oversee all EE-related developments and programmes in the buildings sector, and dedicating resources for the knowledge production and dissemination on EE in buildings to raise awareness among end users and encourage adoption and replication by the private sector.

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

Secretariat Comment at CEO Endorsement Request

6/10/2021 MY:

Not completed at this time.

There is a baseline scenario, but the scenario is not so closely linked to the project components (what the GEF project is going to do and to deliver). Please revise it.

10/5/2021 MY:

Not at this time. Please see comments in Box 1 Part II.

10/26/2021 MY:

Yes, comments were addressed.

Agency Response

**26/10/2021:**

2.The comments on Box 1 Part II were addressed and presented in Box 1.

Previous comment:

Responded under question 1.

**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

6/10/2021 MY:

Not completed at this time.

There is an alternative scenario, but the scenario is not so closely linked to the project components. Please elaborate what the GEF project will demonstrate energy efficiency improvement for the 30 selected buildings, and how the demonstration will be scaled up in the country.

10/5/2021 MY:

Not at this time. Please see comments in Box 1 Part II.

10/26/2021 MY:

Yes, comments were addressed.

Agency Response

**26/10/2021:**

The comments on Box 1 Part II were addressed and presented in Box 1.

Previous comment:

Responded under question 1.

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

Secretariat Comment at CEO Endorsement Request

6/10/2021 MY:

Yes. The project is aligned with the CCM focal area.

#### Agency Response

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

#### Secretariat Comment at CEO Endorsement Request

6/10/2021 MY:

Not at this time.

The project developer did not understand the question:

"5) Incremental/additional cost reasoning and expected contributions from the baseline, the GEFTF,

LDCE, SCCF, and co-financing;"

The question is about justification of using GEF grant \$3 million on the top of existing baseline scenario of the country to deliver agreed and additional global environment benefits. It is not about project budget for years of 2021-2026. The project developer need to learn GEF operations policy and learn from UNDP other experts in project development. Section 5) on page 30 must be re-written.

10/5/2021 MY:

Ok. It seems that the project developers have tried their best way to revise the project.

#### Agency Response

Section 5 has been re-written with the addition of the text below to demonstrate the incremental contribution of the GEF grant.

Well-prepared and enforced building codes have long been a foundation of sound construction in countries with infrastructure which supports their development, progress, and quality of life of their citizens. Building codes result from a number of enabling conditions, namely: strong technical inputs at the public level; public entities national level engaged in the preparation and update of codes, and a regulatory environment at the local level able to encourage and enforce codes and educate consumers about their importance.

The presence of such building codes in turn enables a number of down-stream effects, apart from the direct effect of improved buildings. Construction in accordance with well-formed building codes supports the development of technical skills and

manufacturing capacity for materials in the country by providing a reliable demand for standardized work. This demand thrives only when enabling conditions of a long-term national vision, supported by national legislation and institutions are in place.

Iraq is in the process of building after difficult decades that saw drastic losses in infrastructure, technical ability, and national institutional structure and capability. Construction in accordance with codes and standards almost always costs more upfront, but pays off in the long-run, in energy saved, in quality of building, and in capabilities within the society. In the absence of the enabling conditions mentioned above, building development in Iraq will follow the least-upfront cost path.

GEF-7 is in a position to support a step change in the development of the built environment in Iraq by contributing to the establishment of building energy efficiency codes. Through this establishment, manufacturers, contractors, and consumers can develop confidence in the long-term commitment to energy efficiency in the building sector.

The difficult decades Iraq has faced have stalled the path that many countries have forged during that period, first adding energy efficiency requirements to their building codes, and then improving them as building techniques and building materials improved. As the condition improves in Iraq, the demand for dwellings is expected to experience rapid growth. These new dwellings could be energy efficient given the right enabling conditions.

An energy efficient building is better than a non-energy efficient building in every way (lower operation cost, lower up-front capital cost for air-conditioning, more comfortable to occupy), but it requires the upfront investment of effort and cost and requires understanding of the benefits and availability of the know-how and materials to build in an energy efficient manner. Making such buildings standard is the contribution that the proposed UNDP-GEF project can make.

The UNDP-GEF project will build upon existing works, such as the establishment of a National Energy Efficiency Action Plan, already in place, and the voluntary recommendations of a National Building Code. These efforts have struggled in implementation for lack of a central focal point responsible for intra-government coordination. The UNDP-GEF project is designed to enable a holistic approach to EE in buildings develop building energy efficiency codes; promote their use; promote awareness and know-how; establish the mechanisms to ensure dissemination and sustainability of their use, for example, by establishment of the EEC.

For the reasons mentioned above, the current environment is ripe for intervention of the proposed UNDP-GEF project, and UNDP-GEF are uniquely placed to address the issues that have held back EE in the building sector in Iraq thus far. There are a number of



factors that contribute to the timeliness of the project and UNDP's ability to execute.

These can be summarized as:

- The expected increase in the built environment
- The high energy consumption of buildings in Iraq due to the need for cooling
- The experience of UNDP in Iraq
- The baseline technical capacity in the country and in the Government which can be applied towards energy efficiency

The complementary nature with other UNDP-GEF projects in country, and experience and credibility gained through those projects.

**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

6/10/2021 MY:

Not completed.

The carbon emission reductions due to EE codes and standards (1,798 ktCO<sub>2</sub>e on page 31) needs to be justified. How was this amount calculated? What are the methodology, assumptions, data, etc.? Consequential GHG emission reduction refers to the reduced CO<sub>2</sub> throughout the country due to the impact of the GEF project.

10/5/2021 MY:

Yes, comments were addressed and issues were cleared.

**Agency Response**

The GEF EE tool was used to calculate the direct and indirect GHG emission reductions. The calculation is elaborated in the CEO ER (Section 6, pg. 22). The following changes have been made to enhance the section's clarity:

- The definition provided in the comment for consequential GHG reductions is acknowledged. To eliminate the confusion, reference to "codes and standards" has been removed from the GHG emissions section, maintain the focus on the direct and indirect GHG emissions reduction from the retrofitting activities.

More information on the detailed calculation is provided in response to comment 4 above. In addition, the following text has been added to the CEO ER:

- Based on the review of studies conducted in Iraq between 2016 and 2019, EE-related retrofitting activities in the buildings sector, such as thermal insulation, has the potential to achieve up to 68% reduction in the building's electricity consumption. As a conservative estimate, it is assumed that the retrofitting activities implemented as part of this project will result in 50% reduction in electricity consumption compared to the building's annual consumption without retrofitting, and that the impact will stay in effect for the full length of the post-project analysis period (20 years).
- The total direct GHG emission savings from the retrofitting of 32 buildings during the 5 years' project implementation years is 531,628 tCO<sub>2</sub>e. This amount will be realized at the end of the 20 years' lifetime for project activities, i.e. year 2046.

The indirect bottom up emission savings due to project activities is calculated as 3,978,632 tCO<sub>2</sub>e.

**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

6/10/2021 MY:

Not completed.

The paragraph on Innovativeness on page 32 is not clear. Please use example to justify the following statement in the paragraph "Promoting Carbon Reduction Through EE Techniques in Iraq is an innovative project as it aims to provide tailored practices and develop fit-for purpose innovative regulatory, organizational, and operational solutions that can lead to overcoming the lack of the optimized energy and buildings sector usually linked to low carbon development".

Here is an example of an innovative practice in the US for EE promotion in the residential sector. The local power distribution company (or utility) hires technicians to replace non-efficient lamps with efficient LED lamps for households free of charge, no matter how many lights a household has. This kind of business practice has never happened before in the US, and it can be claimed innovative.

10/5/2021 MY:

Yes, comments were addressed and issues were cleared.

Agency Response

The quoted sentence has been removed and replaced with the following text:

To facilitate the adoption of EE measures by wider groups in the public and private sectors, the project will rely on EE technologies that are already known and have proven record of effectiveness. Nevertheless, innovative approaches will be embraced in the selection of the measures and technologies most appropriate for the context of Iraq, whether in terms of weather and environmental conditions, or designs that speak to the rich history and culture of Baghdad as a capital for modern architecture.

Specifically, the innovations proposed under the project are as below, none of which have previously been applied and implemented in the buildings sector in Iraq, and many not even within the general region:

- Establishment of BEEC, MEPS to be localized specifically for the context in Iraq, but based on best approaches elsewhere, with specific implementable guidance.
- The EEC as a model is an innovation as a partnership model, as a focal point for dissemination of knowledge, and as an implemented example of the knowledge to be disseminated.
- The EEC, as part of a university, is expected to trigger future learning opportunities and partnerships with academia. It is one of the projects innovations for such an entity to be serving an active public role as a focal point for Government, private sector, and the public, as well as being part of a learning institution.
- The project will establish a certification program for auditors, which provides innovations on several levels. Having a certification for the auditors that can be further replicated in other areas; creating demand for technical qualification through a regulatory framework supported by skill development.

#### **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

6/10/2021 MY:

Yes. The map is attached on pages 64-65.

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

6/10/2021 MY:

N/A

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

6/10/2021 MY:

Not completed at this time.

In the CEO ER document, please put the names of project stakeholders to match the outputs of the project in Table B. In the description of project components, please indicate which organizations or project stakeholders will execute the sub-components of capital investments for technology demonstrations.

In the CEO ER document, please elaborate whether this project will benefit or impact any Indigenous or minority Peoples and Local Communities. If so, please show evidence that they have been consulted with the project impacts. Please indicate which stakeholders will be affected by the project on ground and how they have been consulted.

In the CEO ER document, please include information about the future roles of stakeholders and proposed means of future engagement. Please check if the future roles of stakeholders have been identified. Please demonstrate how the project keeps engaging stakeholders through adequate means.

10/5/2021 MY:

Not completed at this time.

Please address the following comments and indicate the revisions of the CEO ER document again:

1. In the CEO ER document, please put the names of project stakeholders to match the outputs of the project in Table B. PROJECT DESCRIPTION SUMMARY.

2. In the description of Component 2 of the project, please indicate which organizations or project stakeholders will use the GEF \$800,000 to execute the sub-component of capital investments for technology demonstrations.

3. Please elaborate whether this project will benefit or impact any Indigenous or minority Peoples and Local Communities.

Please address the comments one by one right to the point. Thank you.

10/26/2021 MY:

Yes, comments were addressed.

### Agency Response

**26/10/2021:**

1. Table B of the CEO ER has been updated to include names of stakeholders as relevant to each output.

2. UNDP will use the GEF \$800,000 to execute the sub-component of capital investments for technology demonstrations. UNDP will be responsible for all procurement and contracting. The following text has been added to the description of Component 2 in the CEO ER: All procurement will be done by UNDP. All investment related cost will be done by UNDP, which includes all procurement and contracting.

3. The project activities will be executed primarily in Baghdad, and secondarily in main city centers. Therefore, the project does not directly relate to indigenous or minority people, as well as local communities. The pilot demonstrations will be executed in Baghdad and EEC will operate in a university in Baghdad, and hence the outputs will be available to wider community and citizens of Iraq. Minorities and others will receive the direct benefits of the project, including reduced national energy usage and related emissions reductions. These points are now reflected in the 1b - 2. Stakeholders section of CEO ER.

Previous comments:

To elaborate on the points raised in this comment, text under Section 2 of the CEO ER has been updated to include the following information:

The project identification was based on the assessment of the national energy context and the analysis of the challenges and needs in Iraq, in consultation with Government authorities and private sector parties. The project team believes that the acceptance of the proposed framework by all actors in Iraq will lead to successful project implementation. Hence, the project idea embraced the need for the UNDP Iraq, as the implementing partner, to work closely with all national stakeholders, including private developers, architects, experts, as well as civil society organizations which can provide crucial support in raising national awareness, changing the common behavior necessary for voluntary endorsement of the proposed regulations prior to their enforcement.

During PPG development, additional consultation meetings were conducted with stakeholder from different entities, where representatives were invited to share their views on the obstacles facing low carbon development in the buildings sector and their suggestions for promoting EE in the buildings sector. These comments have been taken in consideration when developing the project strategy presented in this document. As part of these consultations, the following took place from mid-2020 to-date:

- ? Two main consultation events were held in June 10, 2021 and Dec 17, 2021;
- ? Three site visits to the University of Baghdad (UoB) to identify building for the EEC and secure co financing letter;
- ? Virtual communication with all stakeholders including Ministry of Electricity, Ministry of Construction, Ministry of Housing and Public Works, Ministry of Higher Education and Scientific Research, Ministry of Health and Environment as well as Baghdad Renewable Energy and Sustainable Center (BRESC); and
- ? Contact with The Regional Center for Renewable Energy and Energy Efficiency (RCREEE) for possible partnership during the implementation phase. HACT assessment is underway.

As discussed in the Partnerships section, private sector is a crucial actor in the deployment of EE measures in the buildings sector in Iraq as it plays important roles as consultancy firms, auditors, architects, contractors, and suppliers of building material. Raising awareness is also more effective when the campaigns by the public and private sectors are aligned. Hence, the consultation sessions with stakeholders during PPG development involved Baghdad Renewable Energy and Sustainability Center (BRESC) as a representative of the private sector and a potential partner in the establishment of EEC. BRESC has been working on promoting renewable energy applications and EE practices. The company is leading several initiatives including training of engineers on EE labelling, awareness events on sustainability for primary school and higher grades. BRESC aims to invest in EE materials which has a market value inside and outside Iraq and is one of the co-financiers providing cash funds to support this project.

During implementation, the following groups of stakeholders will be involved in one or more of the project components:

- ? Ministries of Planning, Electricity, Construction, Housing and Public Works, Higher Education and Scientific Research, Health and Environment;
- ? Private sector representatives including BRESC;
- ? Academic sector representatives including UoB;
- ? NGOs; and
- ? Local authorities of selected governorates may be engaged in a later stage in the implementation phase, mainly on consultation, training and awareness of policies and regulations.

The University of Baghdad in particular will be affected by the project, where they will host the EEC. They have been consulted several times to discuss accessibility of the stakeholders, as well as the public. The UoB in an official letter confirmed that the project is in line with its strategies and policies and it will not negatively affect its day to day mandate of teaching and researching.

In addition, the UNDP, in its capacity as an international organization working in Iraq, could also coordinate with donor funded climate and energy initiatives dedicated principally to countries with crisis and fragile contexts. For example, the project plans to engage with the Regional Center for Renewable Energy and Energy Efficiency (RCREEE), a center of excellence in the region, to become a Responsible Party on this project. Such coordination and collaboration will strengthen this project as well as leverage regional best practices in achieving the policy outcomes for Iraq, and potentially in other countries where both organizations are active.

The future roles of the stakeholders will include:

1. MoHEN, UoB and BRESC will be represented in the project board.
2. All other stakeholders mentioned above will be represented in the technical team that will be consulted through out the implementation of the project.
3. It is expected that during the course of the implementation phase more stakeholders might be identified and engaged. This includes but not limited to more private sector entities

Additional details on the project's approach towards stakeholders' engagement can be found in the Stakeholder Engagement Plan (SEP) presented in Annex 9 of the Project Document.

### **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

6/10/2021 MY:

A Gender Analysis and a Gender Action Plan have been undertaken and prepared. They are uploaded onto the Portal. But please double check and elaborate preliminary issues or findings on gender-specific context of the project, describe plans to address gender issues during the project development phase. For example, please show any planned gender responsive measures/activities to address gender gaps and promote gender equality and women's empowerment that is related to the project.

10/5/2021 MY:

Yes, comments were addressed.

**Agency Response** The section on Recommendations in the Gender Analysis and Action Plan has been modified to be called Findings and Recommendations and now includes the main relevant findings of the gender analysis. The gender action plan has also been modified to include more measures that address some of these issues.

**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

6/10/2021 MY:

Yes. A private entity (Baghdad Renewable Energy and Sustainability Center) has been engaged as a financier and a stakeholder.

**Agency Response**

**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



6/10/2021 MY:

Not completed yet.

## 1. COVID-19

Please brief the measures to cope with COVID-19 by responding the following three questions:

1.1 General: Describe briefly how the pandemic overall is addressed in the project, including associated impacts, risks and opportunities. Projects are required to identify and establish likely impacts and risks from COVID-19, and how they will be dealt with in the context of delivering global environment benefits and climate adaptation and resilience benefits.

1.2 Risk analysis: Please consider any risks and measures to deal with the risks that are caused by COVID-19 and post-COVID-19. These risks include (1) availability of Technical Expertise and Capacity and Changes in Timelines in the selected city; and (2) any expected financing from the government and co-financing from all stakeholders. Please describe further how risks from COVID-19 have been analyzed and mitigation strategies incorporated into the design of this project. The project is expected to include consideration to the risks that COVID-19 poses for all aspects of project implementation.

1.3 Opportunity analysis: Describe further how the project has identified potential opportunities to mitigate impacts (if any) created by COVID-19 to deliver GEBs and/or climate adaptation and resilience benefits and contribute toward green recovery and building back the economy.

## 2. Climate Risk Analysis

Plases do more analysis on Climate Risk Screening. Specifically, please double check to ensure that climate risks are identified, listed and described per the guidance of STAP. See <https://stapgef.org/sites/default/files/publications/Climate%20Risk%20Screening%20web%20posting.pdf>

This includes but not limited to:

2.1 Outlining the key aspects of the climate change projections/scenarios at the project locations, which are relevant for the type of intervention being financed (e.g. changes in temperatures, rainfalls, increased flooding, sea level rise, saltwater acquirer contamination, increased soil erosion, etc.).

2.2 Showing risks with a time horizon if feasible/data available (e.g. up to 2050).

2.3 Listing key potential hazards for the project that are related to the aspects of the climate scenarios listed above. This means elaborating a narrative that describes how the climate scenarios indicated above are likely to affect the project, during 2020-2050.

2.4 Describing plans for climate change risk assessment and climate risk mitigation measures. The STAP guidance shows more details on it.

10/5/2021 MY:

Not completed at this time.

Please address the following comments again one by one. Please focus on the impacts of COVID-19 and climate change on THE PROJECT OUTPUTS (Not on the country in general).

1.2 Risk analysis: Please consider any risks and measures to deal with the risks that are caused by COVID-19 and post-COVID-19. These risks include (1) availability of Technical Expertise and Capacity and Changes in Timelines in the selected city; and (2) any expected financing from the government and co-financing from all stakeholders. Please describe further how risks from COVID-19 have been analyzed and mitigation strategies incorporated into the design of this project. The project is expected to include consideration to the risks that COVID-19 poses for all aspects of project implementation.

1.3 Opportunity analysis: Describe further how the project has identified potential opportunities to mitigate impacts (if any) created by COVID-19 to deliver Global Environment Benefits and contribute toward green recovery and building back the economy.

## 2. Climate Risk Analysis

Plases do more analysis on Climate Risk Screening. Specifically, please double check to ensure that climate risks are identified, listed and described per the guidance of STAP. See <https://stapgef.org/sites/default/files/publications/Climate%20Risk%20Screening%20web%20posting.pdf>

This includes but not limited to:

2.1 Outlining the key aspects of the climate change projections/scenarios at the project locations, which are relevant for the type of intervention being financed (e.g. changes in temperatures for buildings, and impact on the operation of energy efficient technologies, etc.

2.2 Showing risks with a time horizon if feasible/data available (e.g. up to 2050).

2.3 Listing key potential hazards for the project that are related to the aspects of the climate scenarios listed above. This means elaborating a narrative that describes how the climate scenarios indicated above are likely to affect the project, during 2020-2050.

2.4 Describing plans for climate change risk assessment and climate risk mitigation measures. The STAP guidance shows more details on it.

10/26/2021 MY:

Yes, comments were addressed.

Agency Response

**26/10/2021:**

**1.** Section 5 of the CEO ER has been updated to include more information on COVID-19 risks, mitigation, and opportunity analysis. The following text has been added:

The project risk analysis has considered risks due to COVID-19 and measures to deal with them. Specifically, with respect to the availability of technical expertise, the project is centered in Baghdad, where the greatest concentration of technical expertise in the country is available. Where foreign technical expertise is required, travel of either the experts or the project staff is envisioned for any expertise that cannot be imparted remotely. Outputs 3.2, 4.1, and 4.2 are specifically dedicated to the localization of expertise which may be more reliably available in a pandemic than international expertise. A severe outbreak of COVID-19 may affect project timelines, particularly as concerns the issuance of regulations, however, the UNDP CO is closely engaged with the Government of Iraq and project entities to follow and mitigate impacts to the extent possible. The project design includes reliance on locally available materials whenever possible. The largest portion of co-finance is provided by the Baghdad Renewable Energy and Sustainability Center (BRESC) that is expected to be available in all but the worst pandemic cases. The second largest tranche of co finance is provided by the Ministry of Health and Environment which is expected to be a recipient of funding in a pandemic. Hence, to the extent possible, COVID-19 risks are identified and mitigated. Further analysis can be found in the Risk Register.

The project provides an opportunity to help builders and the society at large move towards a post-COVID environment. COVID has affected the building sector, as it has every other sector. Particularly in an energy constrained society such as Iraq, where the

need for energy for critical functions such as healthcare has been acutely felt, the project provides the opportunity to make society more robust by addressing demand-side energy efficiency, reducing the need for energy for critical functions, and reducing the gap between supply and demand thereby making energy available to be diverted to critical functions. As energy costs and building material costs increase, the availability of a central unit, the EEC (Output 3.2) to help support and coordinate energy efficiency in the building sector becomes more vital and enables builders to build buildings which better serve society and are more cost effective to build, through the use of locally tested and certified components, and to operate due to increased efficiency. The project therefore helps contribute to a green recovery from the COVID-19 pandemic and promotes resiliency in the face of future pandemics and health crises.

2. The climate risk related text has been added to the Risk section of the CEO ER:

The project team has also undertaken a risk analysis related to climate change and a specific risk was added to the Risk Register Table below (Risk 10).

-

The key aspects of the climate change projects/scenarios at the project location indicate that many of the climate change impacts which are already evident includes rising temperatures, intensifying droughts, declining precipitation, increasing salinization, and the heightening prevalence of dust storms. Observed changes in Iraq's climate are well established. Averaged over the 1950-2010 period, average temperatures have been increasing at a rate of about 0.7°C per century. Over the same period, average rainfall in the southeast part of the country has been decreasing at a rate of about 0.88 mm/month per century while the number of rainy days has also been decreasing. The frequency of dust and sandstorms has also been increasing across Iraq, with dry and dusty winds from the northwest occasionally reaching 108 km/hour at 300 meters above ground from April to early June and again from later September through November. While the maximum number of annual dust storms during 1951-1990 was about 24, sources suggest that within the next ten years Iraq could witness 300 sand dust storms per year due to climatic changes within the region, especially decreases in annual rainfall, as well as the drying of marshland areas. Recurrent drought is also common throughout Iraq and has produced enormous economic, environmental, and social impacts. For example, the average number of drought episodes per decade in the Basrah region increased from 22 during 1990-2000 to 35 during 2000-2010, sparking the development of drought risk management plans in coordination with multilateral organizations.

-

The above climate change impact on the project is assessed to be moderate during project lifetime (Moderate risk - Impact from climate change may occur, but will be limited, transient or manageable. Financial, environmental and social underperformance

or failure is unlikely. The system has the capacity to manage volatility, shocks, stressors or changing climate trends).

The project is located in Baghdad City. Baghdad City is exposed to climate change risks mainly related to increase of ambient temperature during the summer season which may reach more than 50 °C. Baghdad City also suffers from a clear state of surface urban heat island (SUHI), where the temperature difference between urban built areas in comparison with surrounding rural areas is about 17 °C and has a high-risk level of climate change for B1, A2 and A3 IPCC scenarios for 2050 and 2100 from increased temperature levels. The most vulnerable groups are those with low-income levels, low access to infrastructure, elderly (above 65 years), young children (below 5 years) and the sick especially those in health centres. As a mitigation measure, the project will employ best practices of EE technologies in two selected pilot buildings to mitigate the impact of the increasing temperatures.

Dedicating resources to enhance and promote EE in buildings is in line with Iraq's overall mitigation strategy for climate change. The adoption of BEEC and MEPS for buildings is both, a mitigation measure by helping reduce energy consumption and the consequent GHG emissions, as well as an effective form of adaptation to some climate change impacts, by providing buildings that enhances the living conditions for residents and users. The developed BEEC will introduce passive design aspects and climate-responsive building techniques to reduce the effect of heat and reduce demand on energy for cooling, while the MEPS will promote the use of eco-friendly building material, appropriate to the specific location of the buildings constructed.

Previous comments:

1. Covid:

COVID-19 and climate change risks have been reflected in every section of the ProDoc and CEO ER, as relevant. In addition, they have been explicitly stated among the potential risks to project implementation, with appropriate measures for mitigation and/or management.

To elaborate on the points raised in this comment, text in the risks table has been modified. The following is the presently stated mitigation/management measures for item 8:

Item 8: Persistence of COVID-19 until project start and/or throughout project implementation, and/or spread of similarly communicable diseases among the population

In consideration of COVID-19, the project team followed the following approach during PPG development:

- Regulations from the Government of Iraq and the United Nations Assistance Mission to Iraq (UNAMI) was followed, leading to the cancellation of the international consultant's field mission.
- Preventive measures such as virtual meeting were used to ensure social distancing
- Strict use of PPE during the events held physically.

The UNDP CO intends to follow the same approach during project implementation, and stay up-to-date with the new regulations or recommendations that may come out in the future.

Similarly, the objective-level targets of the project have been revisited during PPG development to become more likely attainable. Additional mitigation measures were integrated in the project strategy as follows:

- COVID-19 pandemic emphasized the need to prioritize the health sector. By maintaining the goal of reducing the gap between energy supply and demand as a high priority, the project supports COVID-19 response by facilitating social distancing conditions for people, i.e. enhance the living conditions in buildings, as well as save electricity in the domestic sector to be diverted to more reliable usage in health facilities.
- Procurement of material and goods for retrofitting activities will consist of locally available products, unless otherwise advised by the consultants and contractors. For the procurement of testing equipment, the outcome dedicated to the establishment of a testing facility has been scheduled to start in Year 2 of project implementation. The activities involving procurement may be shifted further, as necessary, taking into consideration the 5 years' implementation period.
- The project will follow UN and host country regulations in terms of social distancing and travel restrictions, abiding by WHO guidelines for preventive measures.

In addition, the project will focus on virtual activities whenever possible, including online consultation meetings and capacity building workshops. The project budget also allocated fees for national consultants to support international consultants on all components. This strategy aims to engage national experts in project implementation to ensure its sustainability, but also to ensure continuity and enhance the ability of the project team to maintain the workflow whether the international consultants were able to conduct field missions or carried home-based assignments to comply with travel restrictions in their home countries and/or in Iraq.

Furthermore, the project approach to knowledge sharing is to create an online platform. The reliance on remote knowledge dissemination serves to expand the reach out, but also to ensure continuity during pandemic crises without putting the different target groups at exposure risks.

The above was analyzed from project design perspective. However, COVID-19 risks were also studied by the project team from an Environmental and Social perspective as part of the development of the project's SESP and ESMF (see Risk 4 in both documents on the Spread of communicable diseases such as COVID-19 among the population).

## 2. Climate Risk Analysis

To elaborate on the points raised in this comment, text in the risks table has been modified. The following is the presently stated mitigation/management measures for item 10:

The Climate Risk Analysis for the project shows that:

1. The key aspects of the climate change projects/scenarios at the project location indicate that many of the climate change impacts which are already evident includes rising temperatures, intensifying droughts, declining precipitation, increasing salinization, and the heightening prevalence of dust storms. Observed changes in Iraq's climate are well established. Averaged over the 1950-2010 period, average temperatures have been increasing at a rate of about 0.7°C per century. Over the same period, average rainfall in the southeast part of the country has been decreasing at a rate of about 0.88 mm/month per century while the number of rainy days has also been decreasing. The frequency of dust and sandstorms has also been increasing across Iraq, with dry and dusty winds from the northwest occasionally reaching 108 km/hour at 300 meters above ground from April to early June and again from later September through November. While the maximum number of annual dust storms during 1951-1990 was about 24, sources suggest that within the next ten years Iraq could witness 300 sand dust storms per year due to climatic changes within the region, especially decreases in annual rainfall, as well as the drying of marshland areas. Recurrent drought is also common throughout Iraq and has produced enormous economic, environmental, and social impacts. For example, the average number of drought episodes per decade in the Basrah region increased from 22 during 1990-2000 to 35 during 2000-2010, sparking the development of drought risk management plans in coordination with multilateral organizations.
2. The above climate change impact on the project is assessed to be moderate (Moderate risk - Impact from climate change may occur, but will be limited, transient or manageable. Financial, environmental and social underperformance or failure is unlikely. The system has the capacity to manage volatility, shocks, stressors or changing climate trends.)

Dedicating resources to enhance and promote EE in buildings is in line with Iraq's overall mitigation strategy for climate change. The adoption of BEEC and MEPS for buildings is both, a mitigation measure by helping reduce energy consumption and the consequent GHG emissions, as well as an effective form of adaptation to some climate

change impacts, by providing buildings that enhances the living conditions for residents and users. The developed BEEC will introduce passive design aspects and climate-responsive building techniques to reduce the effect of heat and reduce demand on energy for cooling, while the MEPS will promote the use of eco-friendly building material, appropriate to the specific location of the buildings constructed.

Taking in consideration Iraq's overall strategy towards mitigation and adaptation to climate change will also be part of the development of the regulatory and institutional framework through the SESA, especially since the project's approach to policy and regulations is to focus on operationalization rather than adding new laws and legislations. Lastly, the project has an outcome for raising awareness and reaching out to practitioners and consumers with information on EE in buildings. The knowledge sharing will reflect the country-specific climate change risks and attempt to direct people towards seeking to reside in buildings that reduce energy demand and support a low-carbon economy.

#### **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  
6/10/2021 MY:

Yes. It is stated / presented on pages 50-51.

#### **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  
6/10/2021 MY:

Not completed at this time.



Please write arguments to support the statement that the project is consistent with the nationally committed conventions or agreements listed on page 52, under the section of 7. Consistency with National Priorities.

10/6/2021 MY:

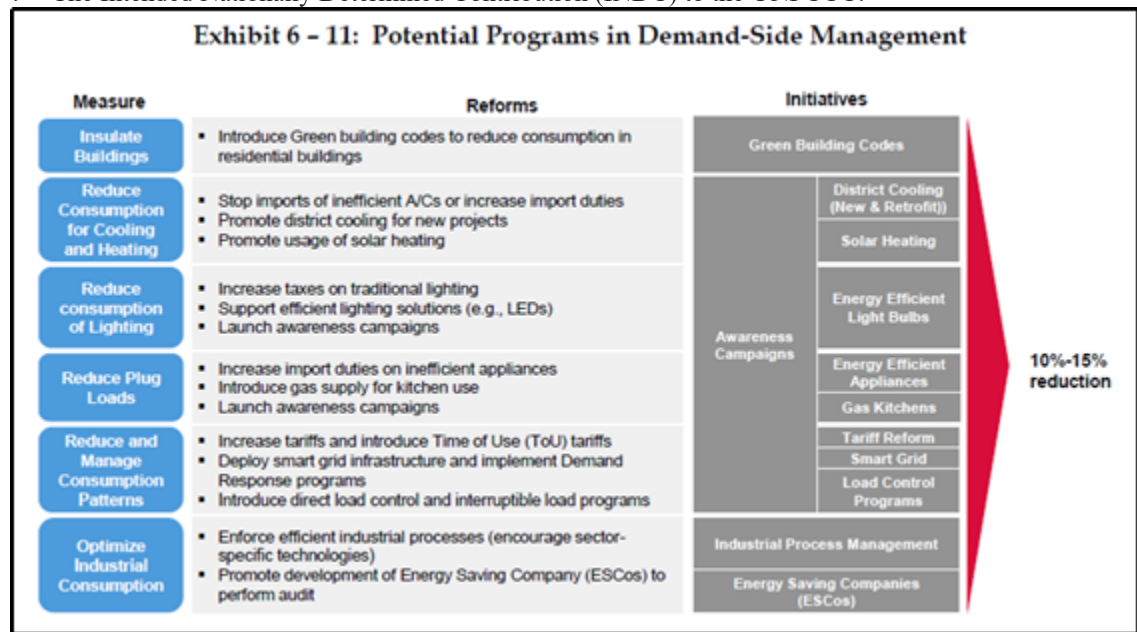
Yes, comments were addressed and issues were cleared.

### Agency Response

The following has been added to the CEO ER (Part II, Section 7):

The project is in line with the main national energy-related strategies and policies including:

- The Integrated National Energy Strategy (INES) for Iraq, where EE in building is one of the measures to reduce energy needs from the demand side:
- ? The Intended Nationally Determined Contribution (INDC) to the UNFCCC:



<b>Housing</b>	<ol style="list-style-type: none"> <li>1. Use energy efficient lighting technologies;</li> <li>2. Use thermal insulation technologies;</li> <li>3. Issue green building codes; and</li> <li>4. Use cost-effective building designs to ensure optimal use of solar lighting and energy.</li> </ol>	<ol style="list-style-type: none"> <li>1. Implement photoelectric energy technologies for the electricity distributed to small zones and towns;</li> <li>2. Integrate building designs using smart meters;</li> <li>3. Integrate photoelectric solar energy in buildings; and</li> <li>4. Enhance the production and use of domestic environment-friendly construction materials.</li> </ol>
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### 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  
6/10/2021 MY:

Not at this time. Please provide

1. an overview of existing lessons and best practice that inform the project concept
2. plans to learn from relevant projects, programs, initiatives & evaluations
3. proposed processes to capture, assess and document info, lessons, best practice & expertise generated during implementation
4. proposed tools and methods for knowledge exchange, learning & collaboration
5. proposed knowledge outputs to be produced and shared with stakeholders
6. a discussion on how knowledge and learning will contribute to overall project/program impact and sustainability
7. plans for strategic communications

10/6/2021 MY:

Yes, comments were addressed and issues were cleared.

Agency Response

The project has an Outcome focusing on developing and operationalizing a Knowledge Management (KM) system for EE in buildings. The following text has been added to Component 4 description to elaborate the project's approach to KM:

The knowledge management approach rests on two main pillars: collecting knowledge and distributing it. The intermediate, often unstated, step is the collation and organization of knowledge.

A central lesson from previous work has been that the organization of knowledge into an accessible, perpetual format is central both to its preservation and its dissemination, and to providing a framework into which knowledge can be continuously collected throughout the project lifetime and beyond. The UNDP team has recently completed the project: Catalyzing the Use of Solar Photovoltaic Energy Project (PIMS 5137, GEF ID: 5063), lessons from which will inform the present project.

As a result of the above, the first proposed output under the Knowledge Management Outcome is the establishment of a user-friendly online portal for energy efficiency. This is a direct outcome of the lessons learned from previous projects. The portal would serve three immediate outcomes:

- a) Organizing the knowledge from the project into an easily accessible, persistent format.
- b) Providing a framework for new knowledge to be deposited into.
- c) By having all knowledge in a digital platform, providing a practical way to backup and save knowledge from the project.

The collection of knowledge will occur through two main channels: obtaining knowledge from the experience of others outside Iraq and obtaining knowledge from experience gained within Iraq as the project progresses.

Initially, it is expected that the main knowledge will come from outside Iraq. For this reason, a specific output (7.2) is dedicated to exchange missions and the cataloguing of knowledge from countries with successful EE practices. This knowledge would be captured in the online portal and help form its structure. This structure would in turn act as a mechanism to help capture knowledge generated within Iraq as the project moves forward.

The online portal, as the central repository of project knowledge, is critical to project success and longevity. For one, it serves as the central source for all stakeholders to access the latest regulations, guidance, and practices. It can serve as a mechanism to connect practitioners and consumers and to verify the credentials of certified auditors.

As a digital platform, it ensures the longevity of knowledge created. It also provides easy access. All those who receive training or come into contact with the project by other means can then refer to the portal for all relevant project information. The portal

also amplifies the impact of project strategic communication. Instead of communicating large volumes of information, the project needs to communicate only two elements - the importance of energy efficiency, which should be self-evident to citizens in an energy starved country; and the address to access the portal. The portal also provides a means to assess the efficacy of strategic communication by evaluating visitors, measuring their engagement with the portal, and eventually capturing means to keep visitors engaged and updated, for example through mailing lists.

Finally, the online portal would serve as one of the central project contributions. By providing a central location for the publication of information and creation of a focal point for engagement of stakeholders it can provide a model in Iraqi society that can be replicated in several other fields and has been shown in other countries to be of tremendous public value.

#### **Environmental and Social Safeguard (ESS)**

**Are environmental and social risks, impacts and management measures adequately documented at this stage and consistent with requirements set out in SD/PL/03?**

Secretariat Comment at CEO Endorsement Request

6/10/2021 MY:

Yes, the issue is addressed in Annex 1. Social and Environmental Screening (Template).

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

6/10/2021 MY:

Yes. It is on page 54.

Agency Response

#### **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

6/10/2021 MY:

Not completed at this time.

Please briefly list the socioeconomic benefits due to the GEF project at the national and local levels. Please elaborate how these local benefits translate in supporting the achievement of global environment benefits (CO2 emission reduction) or climate change adaptation benefits.

10/6/2021 MY:

Yes, comments were addressed and issues were cleared.

#### Agency Response

The following has been added to the Benefits section of the CEO ER (Part II, Section 10):

The project has numerous socioeconomic benefits, at the national, local and individual household levels, as listed specifically below.

At the national level the project:

- Helps reduce demand for electricity, thus relieving the burden on an already overburdened national electric system and allowing it to meet a larger fraction of demand sooner.
- Reducing the amount of fuel needed for power generation, both at the national grid level and in diesel-powered mini-grids which are a main or backup source of electricity for a large portion of the population.
- Well-insulated buildings are more climate resilient, more comfortable to occupy in hot or cold weather.
- Increased vocational training for energy auditors as well as installers and contractors who will do the work.

- Of course, reduction of CO2 emissions as a direct result of reduced energy use.

At the local level:

- Reduced fuel combustion, particularly in diesel generators, will result in reduced air pollution and reduced particulate matter, resulting in better health for the local population.
- Reduced need for fuel transport to support mini-grids also means reduced congestion, and further reduced pollutants.

At the individual house-hold level:

- Reduced cost for cooling homes leaving additional income for other matters
- Improved comfort in the home living space, particularly in the face of more extreme temperatures expected as a result of global warming.

#### **Annexes**

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

Secretariat Comment at CEO Endorsement Request

6/10/2021 MY:

Yes. Annexes A-H are attached to the CEO ER document.

Agency Response

**Project Results Framework**

Secretariat Comment at CEO Endorsement Request

6/10/2021 MY:

Yes. The Project Results Framework is attached to Annex A. But it may need to be revised with the revision of the design of the project.

Agency Response

The Project Results Framework in Annex A has been updated to reflect the changes made in the targets for energy savings and GHG indicator, in line with the updated GHG tool (Annex 12).

Clarifications and justification for the project design strategy are reflected in other parts of the CEO ER to address other comments as relevant.

#### **GEF Secretariat comments**

#### Secretariat Comment at CEO Endorsement Request

6/10/2021 MY:

At the PIF stage, the GEF PM made some comments that should be addressed at the CEO ER stage. These comments are copied and pasted below:

10/29/2019 MY:

More details of financial measures and incentive mechanisms for the operation of the EE Center, after the GEF project implementation period is over, must be provided at CEO endorsement request.

A notice to the Agency:

The implementation and execution roles on GEF projects are meant to be separate per policy and guideline. The GEFSEC will analyze any requests for dual role playing by an agency at the time of CEO endorsement and only approve those cases that it deems warranted on an ?exceptional? basis. We strongly encourage the agency to look at third party options as a preferred way forward. We also strongly encourage the agency to discuss any and all options for execution that do not include the government with the GEFSEC early in the PPG phase. The technical clearance of this PIF in no way endorses any alternative execution arrangement.

Please address these comments if not yet.

In addition, from October 2020 onwards, the GEF started to use revised review criteria with higher standards. To meet the standard, the agency needs to address more issues that are related to Theory of Change (TOC).

Referring to STAP?s primer on the issue of TOC - <https://www.stagef.org/theory-change-primer> , Please draw a chart to demonstrate TOC for this project and write a couple of paragraphs to explain the TOC. Thank you.

10/6/2021 MY:

Yes, comments were addressed and issues were cleared.

## Agency Response

GEF SEC: More details of financial measures and incentive mechanisms for the operation of the EE Center, after the GEF project implementation period is over, must be provided at CEO endorsement request.

The comment and response below have been added to the CEO ER Annex B.

The EEC will be established as a PPP to maximize the benefit of private sector involvement in EE applications in the buildings sector in Iraq. It will be located at Baghdad University where EEC operation will be financed using public funds. More details on the ownership, management arrangements and organizational structure have been provided under Component 2 description (Part II, Section 3).

GEF SEC: A notice to the Agency:

The implementation and execution roles on GEF projects are meant to be separate per policy and guideline. The GEFSEC will analyze any requests for dual role playing by an agency at the time of CEO endorsement and only approve those cases that it deems warranted on an 'exceptional' basis. We strongly encourage the agency to look at third party options as a preferred way forward. We also strongly encourage the agency to discuss any and all options for execution that do not include the government with the GEFSEC early in the PPG phase. The technical clearance of this PIF in no way endorses any alternative execution arrangement.

Please address these comments if not yet.

The comment and response below have been added to the CEO ER Annex B.

UNDP have considered this request of GEF. Given the capacity assessment in the country (current security, political and economic context as well as consultation with international agencies (including GEF implementing agencies), NGOs, academia, private sector etc.) and also given to the discussions with the government of Iraq, we have concluded that DIM modality is the best option.

UNDP will implement the project under Direct Implementation Modality (DIM). However, some activities will be supported by the Regional Center for Renewable Energy and Energy Efficiency (RCREEE) which is a nonprofit, inter-governmental agency for Arab states in which Iraq is a member. RCREEE had been successfully engaged previously with UNDP Iraq through a GEF funded solar energy project.

The national partners will be engaged widely through the project board and technical team that will be established during the first year of the project. Moreover, the University of Baghdad and other national partners will be the main administrative body for the Energy Efficiency Center (EEC).

GEF SEC: In addition, from October 2020 onwards, the GEF started to use revised review criteria with higher standards. To meet the standard, the agency needs to address more issues that are related to Theory of Change (TOC). Referring to STAP's primer on



the issue of TOC - <https://www.stapgef.org/theory-change-primer> . Please draw a chart to demonstrate TOC for this project and write a couple of paragraphs to explain the TOC. Thank you.

The comment and response below have been added to the CEO ER Annex B.

The ToC diagram has been developed and is presented in the CEO ER (Figure under Part II, Section 3).

#### **Council comments**

##### Secretariat Comment at CEO Endorsement Request

6/10/2021 MY:

Not completed yet.

The statement of "Furthermore, private sector co-finance will be used to replicate the adopted EE measures in 30 buildings during the project's lifetime." may not be accepted by the German Council member. Please follow the following German Council comments to revise the design of the project: Germany also asks to examine the possibility of defining a number of public buildings (for example schools) that can serve as pilot projects for the implementation of energy efficiency measures, such as building insulation, cooling, and lighting. This would also help to create a pool of companies that are familiar with the technologies and can continue to use them in other buildings.

11/3/2021 MY:

Please see comments in Box 1.

#### **Agency Response**

The response has been reviewed in line with the responses provided to other review comments in this matrix. The following text has been added to the response:

During GEFSEC review of the CEO ER, the project team added a second public building to the retrofitting activities to be implemented using GEF funds. The location of this building will be selected during the inception phase, in consultation with national partners.

#### **STAP comments**

##### Secretariat Comment at CEO Endorsement Request

6/10/2021 MY:

Not completed.

For an FSP, STAP will provide comments. It seems that the responses to STAP comments are missing. Please check it again.

10/6/2021 MY:

The Agency's response is wrong. The reality is that the GEF STAP requested "Minor issues to be considered during project design".

If the developer did not have enough information on STAP's comments, please ask the UNDP Regional Office or UNDP New York office to get STAP's comments.

10/26/2021 MY:

Yes, comments were addressed.

Agency Response

**26/10/2021:**

The project has been reviewed by STAP and received their response on 4-DEC-2019. The project team has responded to STAP comments and they are now provided in the Annex B of the CEO ER document.

Previous comment:

The project has been reviewed by STAP and received their response, but it did not contain requests for the design phase.

**Convention Secretariat comments**

Secretariat Comment at CEO Endorsement Request

6/10/2021 MY:

N/A

Agency Response

**Other Agencies comments**

Secretariat Comment at CEO Endorsement Request

6/10/2021 MY:

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

6/10/2021 MY:

A Table on PPG utilization is attached at Annex C on page 63.

Agency Response

**Project maps and coordinates**

Secretariat Comment at CEO Endorsement Request

6/10/2021 MY:

Yes. Project maps and coordinates are provided on pages 64 and 65.

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

6/10/2021 MY:

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

6/10/2021 MY:

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

6/10/2021 MY:

N/A

Agency Response

**GEFSEC DECISION**

**RECOMMENDATION**

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

Secretariat Comment at CEO Endorsement Request

6/10/2021 MY:

Not at this time. Please address the above comments.

10/6/2021 MY:

Not at this time.

Please address the above comments very carefully and ask the regional coordinator in climate change to review and comment the project documents before resubmission.

Thank you.

11/3/2021 MY:

Not completed.

Please address GEF PPO's comments that are shown in Box 1 of this review sheet.

11/17/2021 MY:

The agency addressed all comments of the PPO. The project is recommended for the PPO Unit to further clearance.

**Review Dates**

	<b>Secretariat Comment at CEO Endorsement</b>	<b>Response to Secretariat comments</b>
<b>First Review</b>	<b>6/15/2021</b>	
<b>Additional Review (as necessary)</b>	<b>10/6/2021</b>	
<b>Additional Review (as necessary)</b>	<b>10/26/2021</b>	
<b>Additional Review (as necessary)</b>	<b>11/3/2021</b>	
<b>Additional Review (as necessary)</b>	<b>11/17/2021</b>	

**CEO Recommendation**

**Brief reasoning for CEO Recommendations**

The objective of the project is to promote low carbon development in Iraq through supporting the design of a regulatory framework for enhancing Energy Efficiency (EE) in buildings and the creation of an enabling environment for its operationalization. The project consists of four components: (1) Enabling regulatory and institutional framework to promote EE in the buildings sector, including the development of Buildings Energy Efficiency Codes (BEEC) and Minimum Energy Performance Standards (MEPS) for

buildings; (2) Establishing the Energy Efficiency Center (EEC) with mandate for advancing EE measures in the buildings sector through providing technical advice to the public, training to practitioners, and supporting the implementation of the proposed Monitoring, Verification and Enforcement (MVE) procedure; (3) Building Individual and institutional capacities and strengthening EE technical knowledge and expertise to enhance the ability of national parties to develop and operationalize EE policies, regulations, technical codes, and performance standards in the buildings sector; and (4) Monitoring, evaluating and outreaching on EE in the buildings sector in Iraq. The project will establish an EE certification program for auditors, which provides innovations in the energy efficiency improvement domain in the country. With \$3,092,008 of GEF CCM grant, this project will mobilize \$27,310,000 co-financing from other stakeholders of the country. In its lifetime operations, this project aims at mitigating 4.5 million tonnes of CO<sub>2</sub>.

#### Impacts of COVID-19:

COVID-19 may pose several challenges or impacts on the project. First, with respect to the availability of technical expertise, the project is centered in Baghdad, where there is the greatest concentration of technical expertise in the country. When foreign technical expertise is required, the travel of experts or project personnel may be restricted. To deal with the challenges, local expertise must be considered. Outputs 3.2, 4.1, and 4.2 are specifically dedicated to the localization of expertise which may be more reliably available in a pandemic than international expertise. Second, a severe outbreak of COVID-19 may affect project timelines, particularly as concerns the issuance of regulations. However, the UNDP Country Office is closely engaged with the Government of Iraq and project entities to follow and mitigate impacts to the extent possible. Several other measures will be taken to deal with the challenges as well. The project design includes reliance on locally available materials whenever possible. The largest portion of co-finance is provided by the Baghdad Renewable Energy and Sustainability Center (BRESC) that is expected to be available in all but the worst pandemic cases. The second largest tranche of co-financing is provided by the Ministry of Health and Environment which is expected to be a recipient of funding in a pandemic.

#### Opportunity of COVID-19:

COVID-19 has provided an opportunity to make society more robust by addressing energy efficiency, reducing the energy demand for critical functions, and reducing energy gap between supply and demand thereby making energy available to critical functions. As energy costs and building material costs increase, the availability of a central unit, the EEC (Output 3.2) to help support and coordinate energy efficiency in the building sector becomes more and more important to the country. The project therefore helps contribute to a green recovery from the COVID-19 pandemic and promotes resiliency in the face of future pandemics and health crises.