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

## Part I: Project Information

**GEF ID**
**10392**

**Project Type**
FSP

**Type of Trust Fund**
GET

**CBIT/NGI**
CBIT **No**
NGI **No**

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

**Countries**
Iraq

**Agency(ies)**
UNDP

**Other Executing Partner(s)**
UNDP Country Office in Iraq

**Executing Partner Type**
GEF Agency

**GEF Focal Area**
Climate Change

**Taxonomy**

Gender results areas, Gender Equality, Focal Areas, Climate Change, Climate Change Mitigation, Technology Transfer, Energy Efficiency, Influencing models, Strengthen institutional capacity and decision-making, Demonstrate innovative approache, Convene multi-stakeholder alliances, Transform policy and regulatory environments, Stakeholders, Communications, Awareness Raising, Public Campaigns, Education, Behavior change, Beneficiaries, Civil Society, Trade Unions and Workers Unions, Non-Governmental Organization, Academia, Local Communities, Type of Engagement, Information Dissemination, Partnership, Participation, Consultation, Private Sector, Individuals/Entrepreneurs, SMEs, Large corporations, Participation and leadership, Capacity Development, Knowledge Generation and Exchange, Gender Mainstreaming, Sex-disaggregated indicators, Capacity, Knowledge and Research, Knowledge Generation, Innovation, Enabling Activities, Knowledge Exchange

**Rio Markers**

**Climate Change Mitigation**

Climate Change Mitigation 2

**Climate Change Adaptation**

Climate Change Adaptation 0

**Submission Date**

6/8/2021

**Expected Implementation Start**

9/1/2021

**Expected Completion Date**

8/31/2026

**Duration**

60In Months

**Agency Fee($)**

293,741.00

**A. FOCAL/NON-FOCAL AREA ELEMENTS**

| Objectives/Programs | Focal Area Outcomes | Trust Fund | GEF Amount($) | Co-Fin Amount($) |
|---|---|---|---|---|
| CCM-1-3 | Promote innovation and technology transfer for sustainable energy breakthroughs for accelerating energy efficiency adoption | GET | 3,092,008.00 | 27,310,000.00 |
| | | **Total Project Cost($)** | **3,092,008.00** | **27,310,000.00** |

**B. Project description summary**

**Project Objective**

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

| Project Component | Financing Type | Expected Outcomes | Expected Outputs | Trust Fund | GEF Project Financing($) | Confirmed Co-Financing($) |
|---|---|---|---|---|---|---|

| Project Component | Financing Type | Expected Outcomes | Expected Outputs | Trust Fund | GEF Project Financing($) | Confirmed Co-Financing($) |
|---|---|---|---|---|---|---|
| Component 1: Enabling regulatory and institutional framework is designed to promote EE in the buildings sector, including the development of Buildings Energy Efficiency Codes (BEEC) and Minimum Energy Performance Standards (MEPS) for buildings | Technical Assistance | Outcome 1: Appropriate regulatory and institutional framework is designed to catalyze existing policies and programs for promoting EE in buildings, including the operationalization of the National Energy Efficiency Action Plan (NEEAP). | 1.1. An analysis of the existing policies, programmes and national plans is conducted, and an Executive Regulation for EE in Buildings is drafted and submitted for government approval.<br><br>1.2. An analysis of the NEEAP in Iraq is conducted, and the elements required for its operationalization is provided to support rolling-out EE development with a focus on the buildings sector. | GET | 380,000.00 | 2,000,000.00 |
| | | Outcome 2: Internationally recognized BEEC and MEPS for buildings are selected and localized to become suitable for Iraq, including the associating Monitoring, Verification and | 2.1. Appropriate BEEC, including the associating labelling, certification scheme and testing procedure, is selected, localized, and submitted for government approval. This will include aspects of passive design and thermal insulation | | | |

| Project Component | Financing Type | Expected Outcomes | Expected Outputs | Trust Fund | GEF Project Financing($) | Confirmed Co-Financing($) |
|---|---|---|---|---|---|---|
| Component 2: The Energy Efficiency Center (EEC) is established 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 MVE procedure | Technical Assistance | Outcome 3: Energy Efficiency Center (EEC) is established and capacitated to support the development of EE programs and applications in the buildings sector. | 3.1. EEC is established, legally and with physical presence, and is operational as the focal point for promoting EE in the Iraqi buildings sector.<br><br>3.2. Staff at the EEC are capacitated to inform decision-makers, advise investors, raise public awareness, and deliver general and technical training on EE in buildings. | GET | 690,000.00 | 4,185,000.00 |

| Project Component | Financing Type | Expected Outcomes | Expected Outputs | Trust Fund | GEF Project Financing($) | Confirmed Co-Financing($) |
|---|---|---|---|---|---|---|
| Component 2: The Energy Efficiency Center (EEC) is established 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 MVE procedure | Investment | Outcome 4: Testing facility and certification programmes are established under EEC, in accordance with the proposed BEEC and MEPS, to support the implementation of the framework?s MVE procedure. | 4.1. A testing facility containing suitable equipment to measure energy consumption behavior in the buildings sector and perform regular inspection for buildings, in accordance with the proposed BEEC and MEPS, is established at the EEC and operated by EEC staff.<br><br>4.2. Certified Energy Management and Building Auditors Programmes are adopted by EEC, where Energy Managers are capacitated to conduct building inspections and make recommendations for optimizing EE in buildings nation-wide. | GET | 700,000.00 | 19,000,000.00 |

| Project Component | Financing Type | Expected Outcomes | Expected Outputs | Trust Fund | GEF Project Financing($) | Confirmed Co-Financing($) |
|---|---|---|---|---|---|---|
| Component 3: Individual and institutional capacity and EE technical knowledge and expertise are strengthened to enhance the ability of national parties to develop and operationalize EE policies, regulations, technical codes, and performance standards in the buildings sector | Technical Assistance | Outcome 5: Coordination between national parties for the enforcement of existing policies and strategies, including the Iraqi building code, is strengthened. | 5.1. Develop a Data Flow Diagram (DFD) consistent with the proposed Executive Regulation for EE in Buildings to advocate intra-government collaboration and obtain consensus of the parties on the DFD and the manuals to use for staff training.<br><br>5.2. Policy-level training on the proposed regulatory and institutional framework for EE in buildings is conducted, targeting decision makers, public officials, and national experts. | GET | 689,770.00 | 1,111,000.00 |
| | | Outcome 6: The awareness of practitioners involved in the buildings sector, as well as end-users of electricity, on EE regulation and best practices is strengthened. | 6.1. Technical training on EE in buildings is conducted targeting students, technicians, contractors, civil engineers, and architects. This will constitute a Training of Trainers (ToT) workshops to enhance the sustainability of knowledge sharing. | | | |

| Project Component | Financing Type | Expected Outcomes | Expected Outputs | Trust Fund | GEF Project Financing($) | Confirmed Co-Financing($) |
|---|---|---|---|---|---|---|
| Component 4: Monitoring, evaluation and outreach on EE in the buildings sector in Iraq | Technical Assistance | Outcome 7: A Knowledge Management (KM) system is developed, and best practices are catalogued through conducting exchange missions to other countries. | 7.1. A KM system is developed in the form of an online portal for the dissemination of EE in building practices, programs, code, and MVE procedure, on the national level.<br><br>7.2. Exchange missions to relevant regional or international countries with advanced experience in EE buildings deployment are conducted and a best practices catalogue is developed. | GET | 485,000.00 | 1,000,000.00 |
| | | Outcome 8: A Monitoring and Evaluation (M&E) system is developed to track and document progress and impacts of EE initiatives and support the sustainability of EE interventions in the buildings sector. | 8.1. Set up an institutional mechanism to revise and update building energy performance standards regularly, including the development of guidelines for enforcing EE measures in building.<br><br>8.2. Set up an inventory mechanism and database management system for national energy | | | |

| Project Component | Financing Type | Expected Outcomes | Expected Outputs | Trust Fund | GEF Project Financing($) | Confirmed Co-Financing($) |
|---|---|---|---|---|---|---|
| | | | | **Sub Total ($)** | **2,944,770.00** | **27,296,000.00** |
| **Project Management Cost (PMC)** | | | | | | |
| | | | | GET | 147,238.00 | 14,000.00 |
| | | | | **Sub Total($)** | **147,238.00** | **14,000.00** |
| | | | | **Total Project Cost($)** | **3,092,008.00** | **27,310,000.00** |

**C. Sources of Co-financing for the Project by name and by type**

| Sources of Co-financing | Name of Co-financier | Type of Co-financing | Investment Mobilized | Amount($) |
|---|---|---|---|---|
| Recipient Country Government | Ministry of Health and Environment (MoHEn) | In-kind | Recurrent expenditures | 4,010,000.00 |
| Private Sector | Baghdad Renewable Energy and Sustainability Center (BRESC) | Grant | Investment mobilized | 23,000,000.00 |
| GEF Agency | UNDP | Grant | Investment mobilized | 300,000.00 |
| | | | **Total Co-Financing($)** | **27,310,000.00** |

**Describe how any "Investment Mobilized" was identified**

1. BRESC, and their allies from the private sector, will invest no less than USD 23,000,000 (Twenty three million US dollars) in retrofitting a minimum of 30 buildings during the project duration. The retrofitting includes using modern energy efficiency techniques to demonstrate and promote energy efficiency in the buildings sector. 2. UNDP will support the project with USD 300,000 from its annual core resources.

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

| Agency | Trust Fund | Country | Focal Area | Programming of Funds | Amount($) | Fee($) |
|---|---|---|---|---|---|---|
| UNDP | GET | Iraq | Climate Change | CC STAR Allocation | 3,092,008 | 293,741 |
| | | | | **Total Grant Resources($)** | **3,092,008.00** | **293,741.00** |

**E. Non Grant Instrument**

NON-GRANT INSTRUMENT at CEO Endorsement

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Includes Non grant instruments? **No**

Includes reflow to GEF? **No**

**F. Project Preparation Grant (PPG)**

PPG Required **false**

**PPG Amount ($)**

150,000

**PPG Agency Fee ($)**

14,250

| Agency | Trust Fund | Country | Focal Area | Programming of Funds | Amount($) | Fee($) |
|---|---|---|---|---|---|---|
| UNDP | GET | Iraq | Climate Change | CC STAR Allocation | 150,000 | 14,250 |
| | | | | **Total Project Costs($)** | **150,000.00** | **14,250.00** |

## Core Indicators

**Indicator 6 Greenhouse Gas Emissions Mitigated**

| Total Target Benefit | (At PIF) | (At CEO Endorsement) | (Achieved at MTR) | (Achieved at TE) |
|---|---|---|---|---|
| Expected metric tons of CO?e (direct) | 78300 | 1933 | 0 | 0 |
| Expected metric tons of CO?e (indirect) | 156600 | 14405 | 0 | 0 |

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

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

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

| Total Target Benefit | (At PIF) | (At CEO Endorsement) | (Achieved at MTR) | (Achieved at TE) |
|---|---|---|---|---|
| Expected metric tons of CO?e (direct) | 78,300 | 1,933 | | |
| Expected metric tons of CO?e (indirect) | 156,600 | 14,405 | | |
| Anticipated start year of accounting | | 2027 | | |
| Duration of accounting | | 20 | | |

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

| Total Target Benefit | Energy (MJ) (At PIF) | Energy (MJ) (At CEO Endorsement) | Energy (MJ) (Achieved at MTR) | Energy (MJ) (Achieved at TE) |
|---|---|---|---|---|
| Target Energy Saved (MJ) | 563,760 | | | |

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

| Technology | Capacity (MW) (Expected at PIF) | Capacity (MW) (Expected at CEO Endorsement) | Capacity (MW) (Achieved at MTR) | Capacity (MW) (Achieved at TE) |
|---|---|---|---|---|

**Indicator 11 Number of direct beneficiaries disaggregated by gender as co-benefit of GEF investment**

| | Number (Expected at PIF) | Number (Expected at CEO Endorsement) | Number (Achieved at MTR) | Number (Achieved at TE) |
|---|---|---|---|---|
| **Female** | 25,000 | 1,400 | | |
| **Male** | 25,000 | 1,400 | | |
| **Total** | 50000 | 2800 | 0 | 0 |

## Part II. Project Justification

### 1a. Project Description

The proposed components and outcomes in the PIF have been rearranged and reworded to enhance their clarity and specificity. Consequently, the outputs have been shuffled, with multiple rephrasing. The following table presents the main changes proposed to the strategy previously presented at PIF approval.

| Changes made to project design during PPG development | Justification for change |
|---|---|
| Title in PIF: Promoting Carbon Reduction Through Energy Efficiency (EE) Techniques in Baghdad City<br>Project Objective in PIF: To promote a low carbon development through the creation of an enabling Energy Efficiency strategy, programs and applications in Baghdad with a focus on the building sector.<br>**Changed to:**<br>*Title: Promoting Carbon Reduction Through Energy Efficiency (EE) Techniques in Iraq*<br>*Objective: 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 title and objective have been changed to refer to ?Iraq? instead of ?Baghdad?.<br>The change reflects the nature of the components proposed, where Iraq does not have strong administrative divisions within the country such that a regulatory framework can be designed solely for Baghdad. In addition, one of the main additionality aspects of the project is its contribution to operationalizing national policies and coordinating the effort of different parties. By nature, this requires collaboration on the national level. Furthermore, the implementing partner and national stakeholders expressed the desire to undertake capacity building and knowledge production activities nation-wide. Hence, the change serves to emphasize the actual geographic scope. |
| All reference to EE in appliances and equipment has been removed. | The proposed strategy focuses on promoting EE in the design, construction and retrofitting of buildings in Iraq. Developing a regulatory framework to support market transformation to EE appliances and equipment would support enhancing EE practices, and contribute to GHG emissions reductions but is beyond the scope practically achievable in this project. |
| All reference to solar components has been removed. This includes the removal of Output 3.4 in the PIF:<br>Output 3.4: Upgrade, enhance and certify one national testing laboratory and equip the laboratory with testing facilities for solar equipment. | This output refers to equipping national laboratories with testing facilities for solar equipment. The outputs constituting the development of testing facilities in Iraq now focus only on measuring energy consumption behavior in buildings and performing regular inspections to ensure the quality of building material. Testing of solar equipment would support renewable energy development and contribute to recuing GHG emissions in buildings but is beyond the scope of this project. |

| Changes made to project design during PPG development | Justification for change |
|---|---|
| Component 1: Enabling policy, institutional, and legislative framework to support the development of EE programs and applications in the building sector.<br>Outcome 1: Policy for EE in the building sector strengthened and set up in addition to a regulatory and institutional framework to foster low GHG development.<br>**Have been changed to:**<br>*Component 1: Enabling regulatory and institutional framework is designed to promote EE in the buildings sector, including the development of Buildings Energy Efficiency Codes (BEEC) and Minimum Energy Performance Standards (MEPS) for buildings.*<br>*Outcome 1: Appropriate regulatory and institutional framework is designed to catalyze existing policies and programs for promoting EE in buildings, including the operationalization of the National Energy Efficiency Action Plan (NEEAP).*<br>**The change is accompanied by a reduction of $120,000 of the allocated budget for Component 1 - to be diverted to the new Component proposed for KM and M&E.** | In the project description, the PIF indicates that the project would ?help to prepare a new law on energy efficiency to be adopted by Iraqi Government?. After consultation with national stakeholders during PPG development, creating new laws is a timely process and does not guarantee enforcement due to the barriers discussed above. Hence, Component 1 has been modified to support the drafting of an Executive Regulation for EE in buildings as a proposed addition to existing laws, instead of drafting a new law. This change is reflected in the wording of Component 1, but also the wording of the outcomes and outputs it contains, i.e. the focus has shifted to analyzing existing policies and supporting the roll-out of the NEEAP instead of developing new policies and plans. |
| Component 2: Establishment of energy efficiency center.<br>Outcome 2: EE and sustainable measures are advanced and known for selected building types and equipments, and replicated in building investment.<br>**Have been changed to:**<br>*Component 2: The Energy Efficiency Center (EEC) is established 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 MVE procedure.*<br>*Outcome 3: Energy Efficiency Center (EEC) is established and capacitated to support the development of EE programs and applications in the buildings sector.*<br>**The change is accompanied by a reduction of $304,770 of the allocated budget for Component 2 - to be diverted to the new Component proposed for KM and M&E.** | In the PIF, the setting up of the Energy Efficiency Center (EEC) was not explicitly defined neither as a new construction nor retrofitting activities. However, the budget for this component was stated as USD 1,694,770, with the entire amount marked as Investment Fund, i.e. no budget for Technical Assistance. After consultation with national stakeholders during PPG development, it was agreed that the project will target the selection of an existing building for the EEC and invest in retrofitting activities through the adoption of suitable EE measures, then invest the remaining budget in TA activities to ensure proper operationalization in achieved during the project?s lifetime. Hence, the wording and budget of the component has been modified, i.e. GEF INV budget has been reduced to USD 700,000, and an amount of USD 690,000 has been re-allocated to TA activities. This change is reflected in the wording of the component, and the outcomes and outputs it contains. |

| Changes made to project design during PPG development | Justification for change |
|---|---|
| New outcomes have been added under Components 1 and 2:<br>*Outcome 2: Internationally recognized BEEC and MEPS for buildings are selected and localized to become suitable for Iraq, including the associating Monitoring, Verification and Enforcement (MVE) procedure.*<br>**And**<br>*Outcome 4: Testing facility and certification programmes are established under EEC, in accordance with the proposed BEEC and MEPS, to support the implementation of the framework?s MVE procedure.* | The inclusion of these two additional outcomes under serve to emphasize the work required to:<br>1) Develop codes and standards, and domesticate the associating testing procedure - separating these from other activities under Component 1 concerned with the review and operationalization of existing regulations and national plans, and<br>2) Purchase testing equipment ? using part of the investment budget allocated to Component 2, and capacitating EEC staff on the use of these equipment.<br>Their separation as independent outcomes allow the project to add suitable indicators and facilitate the M&E procedure during implementation and audit visits. |
| Component 3: Strengthening individual and institutional national capacity development, expertise, building codes & standards and technical knowledge in the EE buildings sector.<br>Outcome 3: Strengthened capacity on EE buildings knowledge and expertise in Iraq.<br>**Have been changed to:**<br>*Component 3: Individual and institutional capacity and EE technical knowledge and expertise are strengthened to enhance the ability of national parties to develop and operationalize EE policies, regulations, technical codes, and performance standards in the buildings sector.*<br>*Outcome 5: Coordination between national parties for the enforcement of existing policies and strategies, including the Iraqi building code, is strengthened.*<br>*Outcome 6: The awareness of practitioners involved in the buildings sector, as well as end-users of electricity, on EE regulation and best practices is strengthened.*<br>**The change is accompanied by a reduction of $60,230 of the allocated budget for Component 3 - to be diverted to the new Component proposed for KM and M&E.** | The wording of this component and the outcomes and outputs it contains have been changed to enhance the clarity and separate the activities targeting individual and institutional capacity building of the public sector in Iraq from the activities targeting awareness raising among private sector practitioners and end-users of electricity. |

| Changes made to project design during PPG development | Justification for change |
|---|---|
| The PIF included outputs under components 1 and 2 tackling Knowledge Management (KM) and Monitoring and Evaluation (M&E). Per the latest GEF guidance, these aspects should be reflected in an independent component. Hence, Component 4 has been added to gather these outputs under two new outcomes:<br>*Component 4: Knowledge and expertise on EE in the buildings sector in Iraq is managed, guided by best practices from other countries, and the impacts of the developed regulatory and institutional framework is continuously monitored and evaluated.*<br>*Outcome 7: A Knowledge Management (KM) system is developed, and best practices are catalogued through conducting exchange missions to other countries.*<br>*Outcome 8: A Monitoring and Evaluation (M&E) system is developed to track and document progress and impacts of EE initiatives and support the sustainability of EE interventions in the buildings sector.*<br>**The change is accompanied by the allocation of $485,000 for Component 4.** | Complementary to the three components approved in the PIF, Component 4 reflects aspects of KM, i.e. knowledge production, documentation and dissemination, as well as the M&E activities to be conducted in parallel to project implementation.<br>The component consists of two outcomes. The first focuses on the development of a system for KM on EE in buildings, including database keeping for ongoing and future regulatory procedure and facilitating public access to EE-related information. This outcome also captures the exchange missions proposed at PIF stage to ensure that the knowledge obtained from visiting other countries is catalogued and disseminated to become part of the knowledge generation within Iraq. The second outcome focuses on the development of an M&E system to study project progress and impacts of EE initiatives to ensure continuous development and sustainability of EE interventions in the buildings sector in Iraq. |

1a. *Project Description*. Elaborate on:

1) The global environmental and/or adaptation problems, root causes and barriers that need to be addressed (systems description)The development challenge which the project aims to address is the need for rapid expansion in the buildings sector, as part of the post-war reconstruction effort, while minimizing the load on the readily strained fuel-based electricity network. Like most problems, there are alternative solutions that can be implemented to overcome the high GHG emissions in the buildings sector in Iraq. Please see below for the solution tree developed for this project.

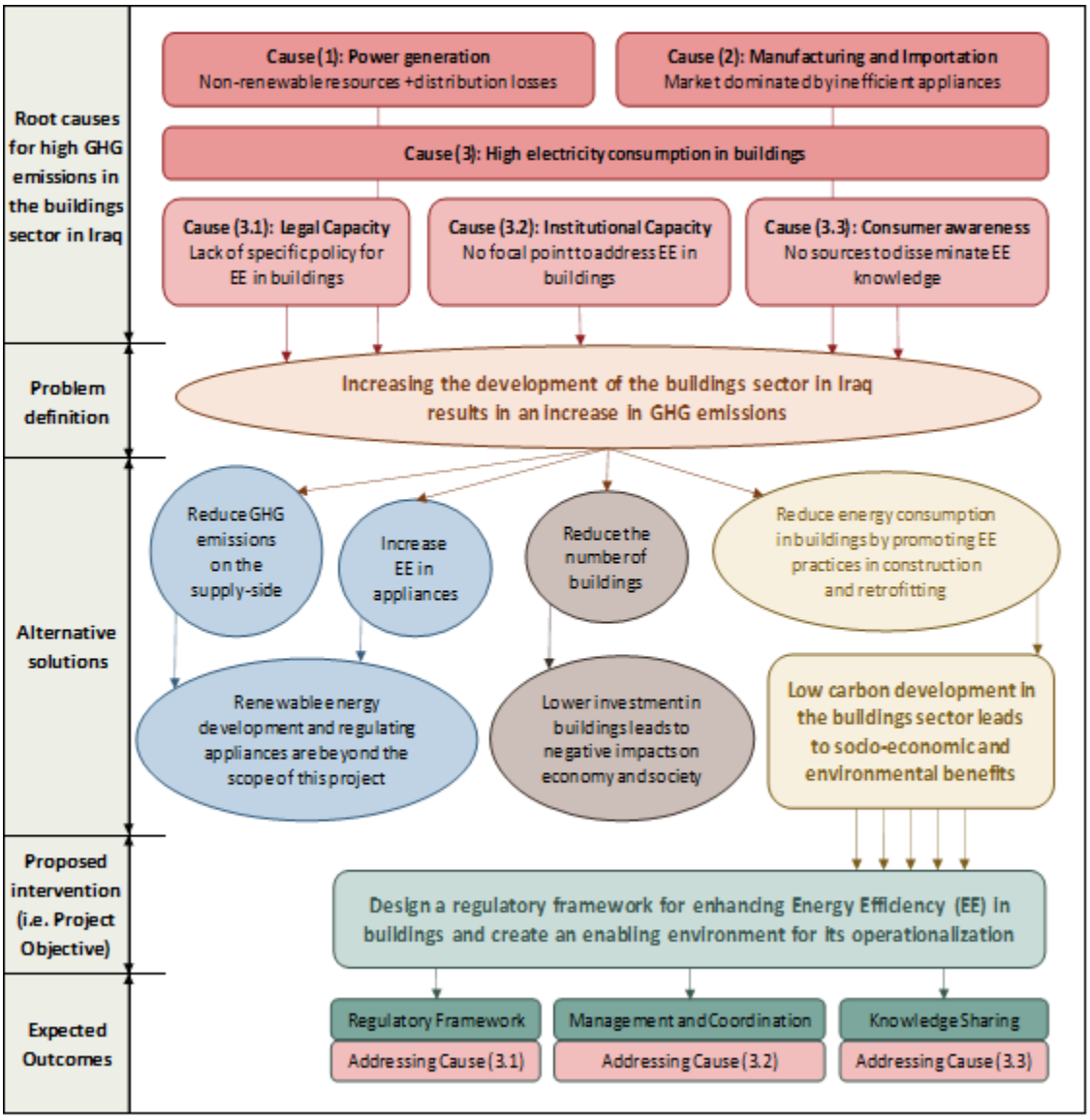
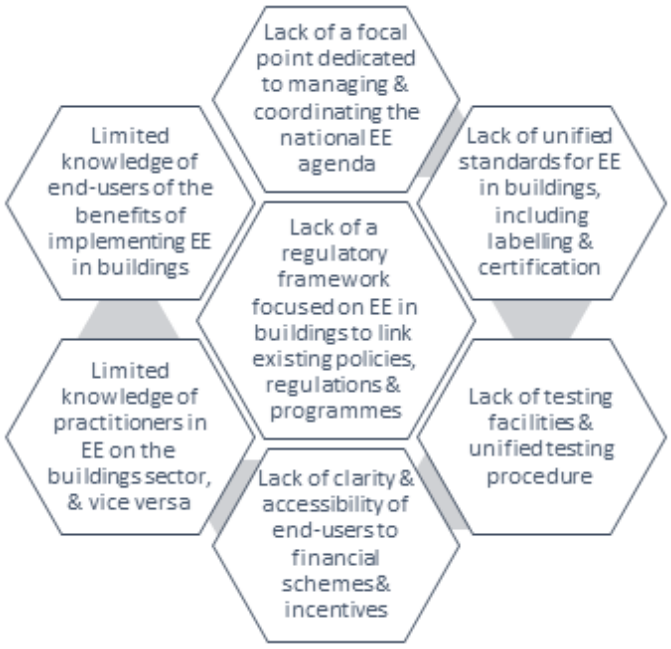



*Figure 2: Solution Tree Diagram - An outline for problem definition and possible solutions*

Other programmes were also developed by the public and private sectors. They faced common barriers which must be studied before embarking on new projects. The following figure presents the outcome of the desk review of data collected by the project and discussions with stakeholders during the consultation workshop. shown in the figure, one major barrier recognized by the project is that there is presently no common framework within which all programmes and initiatives can operate, and no focal point responsible for intra-government coordination. Therefore, the design of a regulatory framework that takes a holistic approach to EE in buildings is envisioned to act as a catalyst for operationalizing existing policies and achieving many of the pre-set goals by the Government of Iraq. This approach includes adding executive regulations to existing policies, establishing a knowledgeable focal point to enhance the coordination between different beneficiaries of EE activities, and developing suitable mechanisms for information flow, data gathering, knowledge sharing, monitoring and evaluation, combined with reinforcement of national capacity and expertise in the public and private sectors.




*Barriers to EE enhancement in the Iraqi buildings sector*

2) The baseline scenario and any associated baseline projects;

The business as usual scenario is that the development in the buildings sector will lead to higher GHG emissions. The Government of Iraq has been actively seeking to advance EE practices and create an enabling environment for low carbon development in the buildings sector. These steps are evidenced by the development of the following key documents:

- National Energy Efficiency Action Plan (NEEAP): This was developed by a high committee for EE, headed by the Ministry of Electricity (MoE) and chaired by representatives from other ministries. The first phase of the NEEAP was developed for the period from 2013 to 2015, targeting a saving of 5% of the national energy consumption, the plan includes proposed actions for the different sectors, including the buildings sector. The latest report was released by the committee in 2018. However, it was reported that implementation and follow up of this action plan fell short of the drafted plan.

- National Energy Building Code: In 2014, the Iraqi ministries developed voluntary building code, including recommendations for thermal insulation and regulations for ?Green Buildings?. It was issued by the Council of Arab Ministers of Housing.

Furthermore, dedicated effort has been put by various government entities in Iraq to promote low carbon development. The following list highlights some of these parties and programmes:

- National Committee for the Renewable Energy and Energy Efficiency: Established under Order No. 54 for the year 2018 by the Council of Minister Secretariat (COMSEC), the committee has an outcome for issuing a ?regulation on EE in buildings for the work of the National Investment Board?. The purpose of the regulation is to make it a requirement for investors to follow the National Buildings Code. Members of the committee reported that financial incentives and soft loans are needed for the outcome to be achieved.

- Integrated National Energy Strategy (INES): Developed through the support of the World Bank managed Iraq Trust Fund, INES goes beyond Iraq's short-term focus of maximizing oil export and revenues, and seeks to diversify Iraq's economy, and create almost 10 million new jobs in the economy by 2030.

- Energy Efficiency Roadmap and Tariff Scheme Framework: Developed in 2013 by a consultant contracted by the UNDP, this roadmap is composed of a set of recommendations, including: (1) Installation of an Energy Agency to be responsible for the Energy Efficiency implementation; (2) Training and Education on EE; and (3) Awareness building to the public on energy usage, saving and efficiency. Other recommendations focused on electricity sector reforms and regulating the market for appliances. There were no results available for review at the time of developing this document.

- Electricity master plan for 2030: Adopted in 2013, this plan had an EE component targeting to decrease the losses in distribution network, supply chain losses and energy consumption.

- Intended Nationally Determined Contribution (INDC): This communication, under the UNFCCC, was submitted by the Iraqi Government ahead of the Paris Agreement, signed in December 2016. In the INDC, Iraq set targets to reduce GHG emissions by 14% below business-as-usual emissions by 2035. Of that reduction, 13% will be conditional and 1% will be achieved through an unconditional target.

- EE labelling for appliances: The Central Organization for Standards and Quality Control (COSQC), under the MoP, is presently heading a national committee for EE labeling of domestic appliances. Labels for air conditioners, refrigerators and washing machines have been issued. The committee is working to cover other appliances including lightening, air cooler, and TVs.

In addition to public policies and public sector programmes, some initiatives were undertaken by different parties:

- Baghdad Renewable Energy and Sustainability Center (BRESC): Established by private investment to raise awareness and provide training on sustainability. While focused primarily on renewable energy, BRESC was part of a campaign tackling EE through education on optimum temperature settings for air conditioners.

- The Energy and Environment Department at Al-Karkh University for Science is reported to have several EE?related thesis and scientific papers which provides innovative, contextualized, solutions.

- The Word Bank is currently developing a project to enhance and reinforce electricity sector in Iraq, the project includes a component aiming to improve the quality, reliability and efficiency of electricity services through the implementation of EE measures and programs on the supply side.

3) The proposed alternative scenario with a brief description of expected outcomes and components of the project;

The main objective of this 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 development challenge which the project aims to address is the need for rapid expansion in the buildings sector, as part of the post-war reconstruction effort, while minimizing the load on the readily strained fuel-based electricity network. The business as usual scenario is that the development in the buildings sector will lead to higher GHG emissions. The project?s theory of change relies on the assumption that the essential ingredients for enhancing EE in buildings are present in Iraq, but require: (1) proper integration in the procedure followed by public partners due to lack of streamlined intra-government collaboration on EE and limited technical and administrative capacity; (2) a focal point with a trained team dedicated to promoting EE in buildings; (3) standards and guidelines for the interventions promoted and the ways to assess them; and (4) effective communication with private partners and end-users on EE practices and benefits. Hence, the project builds upon existing work and develops a national framework within which past, present and future EE-related policies become aligned, complementing Iraq?s efforts to reduce GHG emissions and bringing maximum benefit to the people of Iraq.

As such, the project consists of four components, with two outcomes under each component:

**Component 1. Enabling regulatory and institutional framework is designed to promote EE in the buildings sector, including the development of Buildings Energy Efficiency Codes (BEEC) and Minimum Energy Performance Standards (MEPS) for buildings**

This component aims to create a practical framework for EE in buildings. It focuses on regulatory and institutional aspects for the framework to support the operationalization of existing policies and legislations, rather than develop new ones. In addition, the development of a regulatory framework will include the development of BEEC and MEPS, to provide guidance to developers during building construction and allow for energy monitoring during building use, respectively. The framework will be drafted in the form of a proposed Executive Regulation for EE in Buildings. The developed framework, codes and standards, shall take into account past and present COVID-19 risks and include a procedure for normal operation scenario, and another for the times during which there could be restrictions on mobility. This is to ensure that the potential adoption of the developed Executive Regulation is resilient to the continuity of COVID-19 risks and the eruption of similar risks in the future.

**Outcome 1: Appropriate regulatory and institutional framework is designed to catalyze existing policies and programs for promoting EE in buildings, including the operationalization of the National Energy Efficiency Action Plan (NEEAP)**

The framework aims to consolidate independent policies, codes, legal clauses, and technical standards relevant to EE in buildings, reflecting them in a comprehensive Executive Regulation for EE in Buildings, to be annexed under one of the approved national plans or readily enforceable laws. The framework will also include institutional aspects, engaging with the NEEAP to support its operationalization and enable EE development in the Iraqi buildings sector, as well as measures proposed for the buildings sector in Iraq to become more resilience to climate change and climate risks.

**Outcome 2: Internationally recognized BEEC and MEPS for buildings are selected and localized to become suitable for Iraq, including the associating Monitoring, Verification and Enforcement (MVE) procedure**

One of the top-down strategies commonly employed by policy makers to improve EE in buildings is adopting a set of standards and codes, such as BEEC and MEPS, to enable the enforcement of the proposed regulations. BEEC serves to inform architects and contractors on aspects of passive design and help introducing smart solutions for building envelops. The developed BEEC will build upon the thermal insulation data presently available in the Iraqi buildings code, by studying other aspects thermal insulation requirements and provide recommendations on technologies for air conditioning, energy efficient lighting systems, service water heating, etc. The development process constitutes reviewing the best-practice in BEEC and localizing the most suitable codes for implementation in Iraq.

Complementary to BEEC, MEPS will be developed to promote EE practices and spread a culture of low-carbon development among inhabitants and real estate developers. The localization of BEEC and MEPS covers the associating MVE procedure, which includes performance labelling and certification schemes providing infographics to inform the public on energy use and efficiency - compared to standard levels. Labels and certificates can also include data on the estimated cost of energy consumption. The MVE procedure also include the adoption of a relevant testing procedure. The activities performed under this outcome will form the bases for Outcome 4, i.e. establishing a testing facility and a certification programmes for energy managers and auditors.

**Component 2. The Energy Efficiency Center (EEC) is established 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 MVE procedure**

Consolidating the effort of the different public, private, and international parties and bringing them together under a single framework requires the presence of a focal point dedicated to promoting the adoption of EE codes and standards, offering testing and certifications services, disseminating data on EE in buildings for awareness raising on technical benefits and financial opportunities, gathering data to evaluate market development, and undertaking capacity building activities to enhance EE practices in the buildings sector. Hence, this component is dedicated to the establishment of the Energy Efficiency Center (EEC); a center of excellence for EE in buildings that has administrative offices for staff, meeting rooms for information session and training workshops, as well as a testing facility to support the implementation of MVE procedure. The detailed Procurement Plan for retrofitting of the EEC building - to showcase the benefits of adopting EE measures in the buildings sector - will be developed during Year 1 of project implementation. The Procurement Plan will take into account the risks associated to COVID-19 and the potential impacts on the mobility of people and equipment, and shall seek to obtain all products from local suppliers and provide material available in the domestic markets, as possible. In addition, Private Sector Risk Assessment will be conducted during Year 1 as may be required in accordance with the UNDP Guidelines. Moreover, all procurement to be done under this component will follow a competitive and transparent bidding and selection process. Supplier contracts shall include clauses for performance monitoring, servicing and training of relevant EEC staff. The preparation of the RFP requirements and the subsequent review and assessment of the proposals will include a third-party expert to verify that the subsidy does not exceed the incremental costs of the standard prices in the market that have the similar technical specifics.

**Outcome 3: Energy Efficiency Center (EEC) is established and capacitated to support the development of EE programs and applications in the buildings sector**

During the stakeholder consultations conducted as part of the PPG development, the following aspects were discussed in relation to EEC establishment:

? 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).

? 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 between 300 to 540 square meters. The selection of the exact building will take place during Year 1 of project implementation, as part of the assessment to be conducted to identify the retrofitting activities required for the building to be a showcase for best-practice in EE in buildings.

? Funding for establishment (i.e. rental and retrofitting activities): The establishment funds will be provided by the GEF investment fund, in the form of rental cost and the costs of 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 financed using public funds. During the project?s lifetime, co-finance by the MoHEn will be used for staff salaries, while the responsibility of technical operation and building maintenance will be delegated to BRESC (see the co-finance letters presented in Annex 13). The PPP will include suitable arrangements for post-project financial and operational arrangements.

As described, the establishment and operation of EEC during the project?s lifetime does not constitute direct co?finance by the private sector. However, private sector co-finance will be used to replicate the adopted EE measures in 30 buildings during the project?s lifetime. The replication aims to maximize the benefits of the GEF investment in EEC building and develop a knowledge base among practitioners and end users on retrofitting activities, the different EE measures and their benefit to reducing electricity consumption and GHG emissions.

**Outcome 4: Testing facility and certification programmes are established under EEC, in accordance with the proposed BEEC and MEPS, to support the implementation of the framework?s MVE procedure**

As mentioned in Outcome 2, the proposed BEEC and MEPS will include MVE procedure in the form of certification schemes and testing procedure. The scope of adoption of these procedures on new buildings and retrofitting activities will be defined in the Executive Regulation to be developed under Outcome 1, with the overall goal being to monitor the energy performance of buildings, verify compliance with codes and standards, and enforce regulations as relevant. EEC will be mandated to issue annual MVE reports to EE stakeholders, but the inspection frequency will be identified for each type of testing/certification.

**Component 3. Individual and institutional capacity and EE technical knowledge and expertise are strengthened to enhance the ability of national parties to develop and operationalize EE policies, regulations, technical codes, and performance standards in the buildings sector**

**Outcome 5:** Coordination between national parties for the enforcement of existing policies and strategies, including the Iraqi building code, is strengthened

**Outcome 6:** The awareness of practitioners involved in the buildings sector, as well as end-users of electricity, on EE regulation and best practices is strengthened

Nation-wide change in EE practices requires the commitment of all national parties involved in the buildings sector. The public sector is planned to drive the change through the proposed regulatory framework, but the private actors and communities have an equally critical role in realizing the aspired change. This component focuses on the human factor of project success and defines how EEC, as a newly established focal point, can contribute to facilitating the intra-government and public-private collaboration between stakeholders and develop national capacities and public awareness on EE in buildings. The outcomes under this component aim to build the institutional capacity of the public sector, by offering policy-level training and supporting tools to enhance intra government collaboration. They also aim to build the capacity of present and future practitioners through technical training and create a well-informed public able to demand services in compliance with EE best practices. Furthermore, as part of the work under this component, the UNDP-GEF project team will support EEC engagement with existing financing mechanisms and incentive schemes offered by the government and international donor agencies, loans facilitated by commercial banks, and ongoing initiatives by NGOs, to raise awareness on possible opportunities for financial support and bridge the entities providing finance to their potential beneficiaries. 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. On-line meetings and 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.

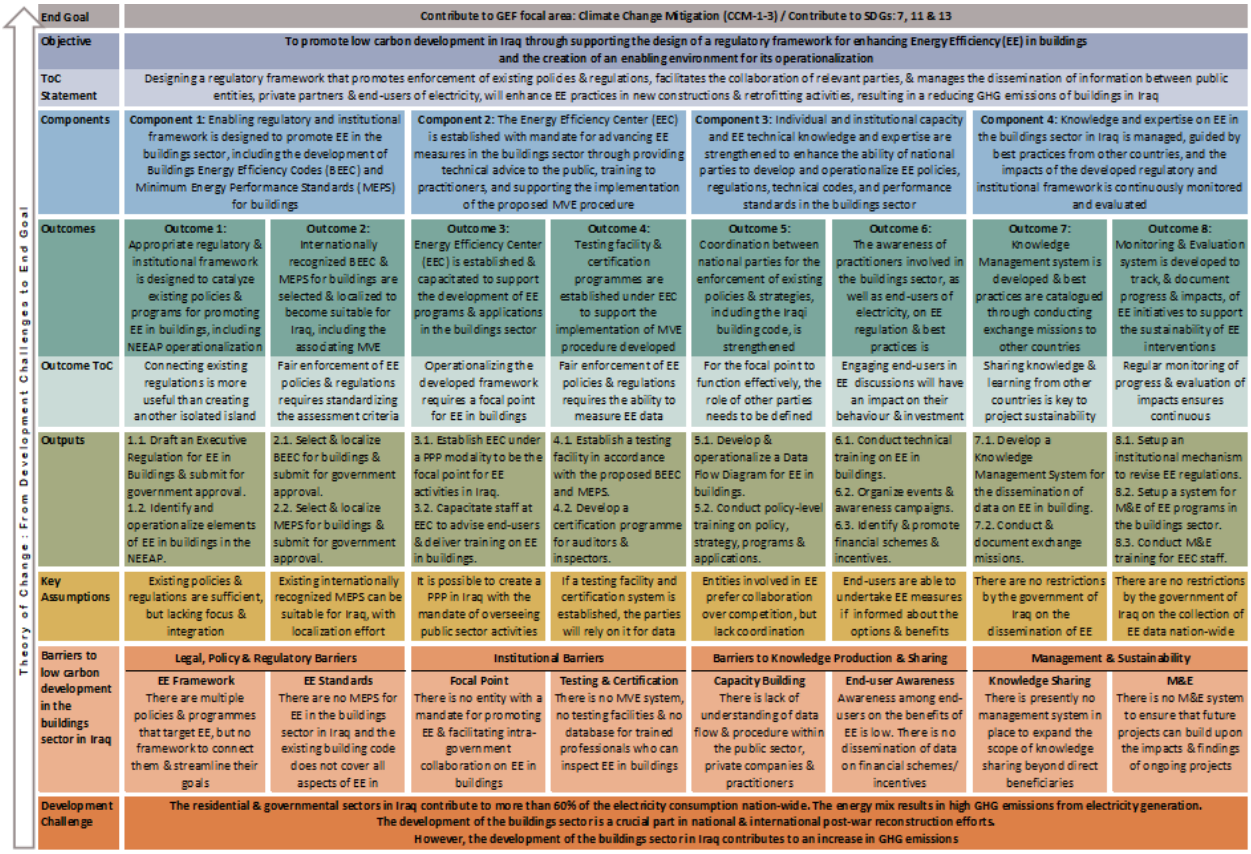
**Component 4. Knowledge and expertise on EE in the buildings sector in Iraq is managed, guided by best practices from other countries, and the impacts of the developed regulatory and institutional framework is continuously monitored and evaluated**

**Outcome 7:** A Knowledge Management (KM) system is developed, and best practices are catalogued through conducting exchange missions to other countries

**Outcome 8:** A Monitoring and Evaluation (M&E) system is developed to track and document progress and impacts of EE initiatives and support the sustainability of EE interventions in the buildings sector

Part of ensuring the sustainability of project activities and prolonging its impact beyond the project duration is to maintain a system of monitoring, evaluation, knowledge sharing, and knowledge dissemination. The sustainability of these systems requires the ability to maintain uninterrupted operation during COVID-19. Hence, it is proposed that the Knowledge Management (KM) system takes the form of an online portal, reducing in-person contact and ensuring the work can proceed in case there continues to be restrictions on mobility during project implementation. The information contributing to knowledge production should be collected in an organized manner and constantly

feeding the design of new interventions. The outcomes under this component serve to ensure that knowledge management, monitoring and evaluation are accounted for as independent tasks, but also integrated in all aspect of project implementatione following figure presents the Theory of Change (ToC) for this project, including the ToC statement for the project objective, components, and outcomes, as well as the project outputs and the key assumptions embedded in the design of proposed activities.




*Theory of Change Diagram ? A summary of the project strategy and casual chain analysis*

4) Alignment with GEF focal area and/or Impact Program strategies;

The project focuses on the solution entailing an increase in EE in the buildings sector, to allow for further development in the buildings sector while support the country achieve it's GHG emission reductions plans. The proposed strategy in this Project Document builds upon the strategy presented in the PIF. It continues to be aligned with GEF focal area on Climate Change Mitigation (CCM-1-3). The project is also aligned with the UN?s Sustainable Development Goals (SDGs) and contributes to achieving SDG-7 (Target 7.3) concerned with doubling the global rate of improvement in energy efficiency, as well as SDG-11 (Target 11.C) by offering technical assistance to promote sustainable

buildings, and SDG-13 (Target 13.2) by contributing to integrating climate change measures into national policies, strategies and planning.

5) Incremental/additional cost reasoning and expected contributions from the baseline, the GEFTF, LDCF, SCCF, and co-financing;

The total cost of the project is USD 29,402,009. This is financed through a GEF grant of USD 3,092,009 administered by UNDP, USD 300,000 in cash co-financing to be administered by UNDP and additional support of USD 26,010,000. UNDP, as the GEF Implementing Agency, is responsible for the oversight of the GEF resources and the cash co financing transferred to UNDP bank account only. The following table presents the summary of funds from GEF and other sources.

| | **Amount 2021/2022** | **Amount 2022/2023** | **Amount 2023/2024** | **Amount 2024/2025** | **Amount 2025/2026** | **Total (USD)** |
|---|---|---|---|---|---|---|
| **GEF grant administered by UNDP** | $ 331,000 | $ 768,200 | $ 807,000 | $ 737,000 | $ 448,809 | $ 3,092,009 |
| **Grant co-finance by GEF Agency: UNDP** | $ 58,800 | $ 58,800 | $ 60,800 | $ 60,800 | $ 60,800 | $ 300,000 |
| **In-kind co-finance by the Government of Iraq: MoHEn** | $ 1,600,000 | $ 600,000 | $ 610,000 | $ 600,000 | $ 600,000 | $ 4,010,000 |
| **Grant co-finance by the Private Sector: BRESC** | $ 2,000,000 | $ 3,000,000 | $ 6,000,000 | $ 6,000,000 | $ 6,000,000 | $ 23,000,000 |
| **TOTAL** | **$ 3,989,800** | **$ 4,427,000** | **$ 7,477,800** | **$ 7,397,800** | **$ 7,109,609** | **$ 30,402,009** |

6) Global environmental benefits (GEFTF) and/or adaptation benefits (LDCF/SCCF); and

During PPG development, the estimation of GHG mitigation has been re?calculated using GEF Tool for EE projects and actual baseline figures obtained from the national consultants and UNDP CO team. According to an analysis performed by USAID in 2013, the energy sector is the main source of GHG emissions in Iraq. The energy sector has also shown the largest total increase in GHG emissions over time, where it increased from 112 $MtCO_2e$ in 1991 to 261 $MtCO_2e$ in 2013.[1][1]

In the Project Identification Form (PIF), it was assumed that the project will lead to at least 1% reduction in the GHG emissions in the energy sector, i.e. 2,610 $ktCO_2e$/year. This estimation contained a calculation error by a factor of 1,000 ? possibly due to a mistake in the reading of units provided in the USAID study referenced above. In addition, the PIF did not present an independent calculation for the direct GHG mitigation from the project?s investment component, i.e. the GHG mitigated due to reduced energy consumption in the retrofitted demonstration building. The total value in PIF (78,300

$tCO_2e$) presents the miscalculated annual reduction (based on the 1% assumption) multiplied by 30 years. Therefore, the PPG team discarded the PIF data on GHG and applied a new calculation using raw data from national parties, secondary data from international reports and the GHG calculation tool provided by GEF for EE projects.

The detailed calculation conducted during PPG development estimates that by 2046, this project would result in GHG emission reduction of about 1.8 $MtCO_2e$, i.e. approximately 90 $ktCO_2e$/year. This value translates to 0.03% annual reduction in the GHG emissions from the energy sector, which is considered by national parties to be more reasonable than the PIF assumption.

The calculation was based on the following data, obtained from a desk review and discussions with national partners:

- Grid electricity transmission and distribution loss rate is 62.5%, obtained from the Annual Report by MoE for 2018 showing 53% distribution losses, 6.5% transportation losses and 3% waste in generation plants,
- Grid electricity emission factor in Iraq is 0.82 $tCO_2e$/MWh, obtained from a Technical Paper by ECOMETRICA, issued in 2011 on Electricity-specific Emission Factors for Grid Electricity,
- Annual electricity consumption in households in Iraq is 78 kWh/$m^2$, obtained from the national team.
- Total population in 2019 is 39,127,889 persons, with 70% residing in urban areas, as reported by the MoP,
- Average area per household is 150 $m^2$, and the average occupancy per household is 6 persons, as reported by MoCHPMW, and
- Annual population growth rate is 2.3%, obtained from World Bank data for 2018 and considered to be a representative metric for forecasted increase in energy-consuming households over time, as opposed to the annual construction growth rate which potentially includes unoccupied buildings.

In addition, the following assumptions and estimates were developed in consultations with national parties:

- Different EE measures have different lifetimes. It is assumed that the compliance with the new codes would result in 10% reduction in electricity consumption, and that the impact will stay in effect for the full length of the post-project analysis period (20 years).
- The compliance with the new codes will depend on successful project implementation, but also on other factors affecting law enforcement in Iraq more generally. As a conservative estimate, it is assumed that after the codes are approved by the government, 1% of the total buildings in urban areas will become compliant with the new codes and standards every year, either in the form of new buildings designed and constructed according to the new standards or through retrofitting activities implemented in existing buildings. The focus of the calculation on the buildings in urban areas is based on their relatively high electricity consumption, as opposed to rural households which usually contain less appliances, and the overall formality in the building requirements, such as land rights, licensing procedure, etc.
- The retrofitting of EEC building to demonstrate the impacts of implementing EE measures is expected to have a spillover effect. As a conservative estimate, it is assumed that the retrofitted EEC building will be at least 300 $m^2$, and will result in the retrofitting of at least 10 buildings per year during the project lifetime, and the retrofitting of at least five buildings per year and the construction of at least five buildings per year in accordance with the developed framework after the approval of Executive Regulations at project end, i.e. 31 buildings retrofitted during Years 3 to 5 of implementation, in addition to 200 buildings replicating the EE measures implemented in EEC during the 20 years analysis period.

Using the data and estimates above to calculate GHG reduction in accordance with GEF guidance (See Annex 12 of the UNDP Project Document), the following are the projected direct and indirect GHG emissions reduction expected by the project:

*Retrofitting of EEC building:* Total direct GHG emission savings = 1,933 $tCO_2e$ *(296 $tCO_2e$ during the 5 years project lifetime and 1,637 $tCO_2e$ post-project during the 20 years analysis period)*

*EE codes and standards:* Total consequential GHG emission mitigated = 1,798 $ktCO_2e$

The number of direct beneficiaries from project activities is estimated to be 2,800 persons, based on the outcome?level targets set in the results framework, with an overarching goal of ensuring that around 50% of the beneficiaries are females. In addition, the following is an estimation of the number of in-direct beneficiaries:

- Urban population in 2019 is 27,389,522 persons, as reported by the MoP
- Percentage compliance with building codes is assumed to be 1%

Therefore, the consequential project benefits are expected to reach approximately 274,000 persons/year of in-direct beneficiaries.

7) Innovativeness, sustainability and potential for scaling up.

Innovativeness:

There are many EE techniques that have been deployed and proven to lead to energy savings, hence, a reduction in GHG emissions from buildings. Nevertheless, 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. It also offers a relatively innovative contribution to supply side problems, by reducing the demand per household and paving the way to a dialogue on subsidy restructuring, i.e. subsidizing electricity consumption versus subsidizing the implementation of EE measures to reduce consumption. Moreover, the M&E component of the project will help set up a dedicated energy and environmental database that integrate climate change information and objectives, with capacity building on efficient reporting and effective knowledge tracking and dissemination.

Sustainability:

From a strategic perspective, the implementation of EE measures in the buildings sector will systematically secure the energy system and have positive impacts on both environmental and economic sustainability. According to the IEA?s latest analysis on EE, a global effort and commitment to deploy the appropriate EE policies could considerably drop GHG peak. Furthermore, promoting EE improvements and low-carbon development is in line with the recommended global response to COVID-19 crisis and help in reducing the risk of emerging infectious diseases in the future, while increasing the resilience of the ecologic and socio-economy systems to emergency situations. By focusing on creating an enabling regulatory and institutional framework the project is expected to support the Government of Iraq to develop and sustain low carbon development in the buildings sector.

From a climate change perspective, the selection of high-quality, climate-resilient, sustainable materials to be used in buildings will help support that the efficiency of buildings remains high during their lifetime. As the lifetime of building materials increase against climate risks, the energy consumed in the manufacturing of more material will decrease, reducing the overall GHG on the buildings sector supply chain further.

From an organizational perspective, and notwithstanding that implementation will follow a DIM modality, the project will be endorsed by the Ministry of Electricity in Iraq. This endorsement will guarantee the alignment of project implementation with national strategies and will facilitate the

achievement of Outcome 2 focusing on the operationalization of the NEEAP. Furthermore, the results framework is structured to ensure sustainability of all activities performed in two ways. The first is dedicating investment and technical assistance funds for the establishment of a focal point for EE in buildings. During the baseline assessment exercise, it was clear that several programs and initiatives have common goals but lack the coordination required to consolidate their efforts. During the consultation meeting, stakeholders emphasized the need to avoid spending more years on developing new legal documents in the lack of the institutional framework and capacity to operationalize them. In response to these findings, the project favored to focus on filling this gap by prioritizing the establishment of EEC, and building its capacity to be fully operational by project end, over the development of new abstract laws with no strategy for their use in the foreseeable future.

The second is developing the project timeline such that EEC staff are engaged in the implementation of the proposed outputs and activities starting Year 3 of the project?s lifetime. With the integration of EEC as a key player in the project while progressing, the transition arrangement, i.e. exit strategy, is transformed from being an output required at project end to an integrated aspect of project implementation and success. The embedded assumption in this aspect of project strategy is that involving EEC in the project while the work of the international consultants is ongoing will allow EEC staff to grow into the role required of them, as opposed to the model in which the implementing partner is solely accountable for results until the point of ?handing over? to national parties. This becomes of particular importance for projects implemented under a DIM modality and sends a positive message to the Government of Iraq that the success of this UNDP-GEF project intersects with the successful collaboration between public and private partners on establishing and maintaining EEC as an operating PPP overseeing all matters related to EE in the Iraqi buildings sector.

Financially, the project aims to ensure sustainability of the project objective through Output 6.3, which focuses on identifying, promoting, and monitoring financial schemes and incentives mechanisms which can be deployed for enhancing EE in buildings. With regards to the financial sustainability of EEC operation, the establishment as PPP aims to allow the center to see finance for itself through the Government, international donors, or private sector companies. The PPP model also leaves room for the EEC to offer fee-based services after project closure, e.g. offering audit, training or technical advice, as long as it does not lead to conflict of interest with EEC mandates of overseeing the EE market and operating the testing facility for certification and labelling services.

Potential for scaling up:

Strong potential exists for the project to be replicated in other countries in the region to address the problems of power shortages and bridge the gap between the need to expand the construction sector and the damaged energy infrastructure. As a country in post-war reconstruction phase, Iraq?s success in finding a regulatory and institutional framework that works in the context of multi-layered regulatory and institutional imperfections can lead the way to equally contextualized interventions suitable for adoption in neighboring countries in similar situations.

The capacity building and knowledge management component of the project will also contribute to the creation of a pool of national experts familiar with the best practices in the field of EE in buildings on the policy and technical levels. This will have positive impacts on social development and job creation

within Iraq, but also facilitate the work of international developers in the region through finding young, skilled, and bilingual, individuals who can utilize the knowledge they have to advance EE projects in different countries.

The public awareness component also has a catalytic effect on local markets and is equally important to continuous development of the EE market in Iraq, where it leads to attracting new service providers and equipment suppliers, increasing competition and driving down prices for EE-conscious designs, contractors and building material.

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[1] GHG Emissions Factsheet, USAID, 2017 - https://www.climatelinks.org/resources/greenhouse-gas-emissions-factsheet-iraq

**1b. Project Map and Coordinates**

**Please provide geo-referenced information and map where the project interventions will take place.**

The hard component of the project will in Baghdad in the form of the establishment of the Energy Efficiency Center (EEC), including a testing laboratory. However, the soft components such as regulations and codes, capacity building, and knowledge dissemination, will be applicable nationwide. Maps for project location are provided in Annex E.

Proposed location for EEC at Baghdad University (location coordinates: 33?16'15.8"N 44?23'07.8"E)


**1c. Child Project?**

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

NA

**2. Stakeholders**

**Select the stakeholders that have participated in consultations during the project identification phase:**

**Civil Society Organizations** Yes

**Indigenous Peoples and Local Communities**

**Private Sector Entities** Yes

**If none of the above, please explain why:**

**Please provide the Stakeholder Engagement Plan or equivalent assessment.**

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 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 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.

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.

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

See Annex 9 of the Project Document.

**Select what role civil society will play in the project:**

**Consulted only;**

**Member of Advisory Body; Contractor;** Yes

**Co-financier;**

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

**Executor or co-executor;**

**Other (Please explain)**

**3. Gender Equality and Women's Empowerment**

**Provide the gender analysis or equivalent socio-economic assesment.**

To enhance the gender impact of the project, a Gender Analysis and Gender Action Plan were prepared as part of the PPG development and can be found in Annex 11 of the Project Document. The following summarizes the recommendations of the plan:

? Encourage national partners to ensure women?s participation and their equal and active participation ensured in all project-related events including consultation processes, workshops and informative events, at the level of at least 30% of total participants, with special focus on young women professionals in the field of engineering, including university students and academics. This includes primarily the awareness raising activities regarding construction and retrofitting of buildings, as well as end-users of electricity in buildings, on EE regulation and best practices.

? Whenever possible, data collected throughout the duration of the project should be disaggregated by age and gender, including participants in events and project activities as well as monitoring and evaluation of the developed knowledge management framework on EE in the building sector in Baghdad.

? Capacity of all stakeholders including the project team and government partners will be increased on gender equality and the UNFCCC gender action plan.

? Ensure women representation within staff of the planned Energy Efficiency Center, to be provided with adequate technical training to meet job requirements.

Ensure equal representation for men and women in activities related to capacity development in building codes & standards and technical knowledge in the EE buildings sector (covered under Component 3, Outcome 6)

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

Yes

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

**Improving women's participation and decision making** Yes

**Generating socio-economic benefits or services or women** Yes

**Does the project?s results framework or logical framework include gender-sensitive indicators?**

Yes

**4. Private sector engagement**

**Elaborate on the private sector's engagement in the project, if any.**

The 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.

To emphasize the role of the private sector in project success, 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). 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 financed using public funds. During the project?s lifetime, co-finance by the MoHEn will be used for staff salaries, while the responsibility of technical operation and building maintenance will be delegated to BRESC. Furthermore, private sector co-finance will be used to replicate the adopted EE measures in 30 buildings during the project?s lifetime. The replication aims to maximize the benefits of the GEF investment in EEC building and develop a knowledge base among practitioners and end users on retrofitting activities, the different EE measures and their benefit to reducing electricity consumption and GHG emissions

**5. Risks to Achieving Project Objectives**

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

| # | Description | Risk Category | Likelihood & Impact | Risk Treatment / Management Measures | Risk Owner |
|---|---|---|---|---|---|
| 1 | Inability to maintain the political will required to introduce a new Executive Regulation for EE in buildings and to enforce building codes and standards | Political | Without political will, the developed framework will not be approved, jeopardizing the sustainability of the project strategy.<br><br>*Level: Substantial*<br>*L = 3*<br>*I = 5* | The Iraqi Government has the interest to implement this project. The stakeholders consulted during project development considered that this project will play a crucial role to close the gap between electricity supply and demand. Existing strategies at the national and local levels as well as legal frameworks will provide a conducive environment to execute EE development. During implementation, the project team will also ensure an inclusive, participatory approach at the local level, involving all key stakeholders. In addition to developing the data flow diagram to facilitate the collaboration on EE enhancement, a clear institutional arrangement will be established that facilitate coordination between the national, regional, and local levels of government. | UNDP CO, in their capacity as the project?s Implementing Partner |

| # | Description | Risk Category | Likelihood & Impact | Risk Treatment / Management Measures | Risk Owner |
|---|---|---|---|---|---|
| 2 | Inability to link EE promotion to energy pricing strategy | Political | In the presence of high subsidies on electricity tariffs, rolling out of EE measures will be more challenging and less impactful.<br><br>*Level: Moderate*<br>*L = 4*<br>*I = 3* | By involving all stakeholders in the energy and buildings sectors in the framework discussion, the project will promote an inclusive national energy debate and policy dialogue at high level. Based on the input to be obtained from the different parties, the proposed framework could potentially include government support schemes for the transition from high subsidies, to lower subsidized linked to efficient consumption in the buildings sector. | UNDP CO, in their capacity as the project?s Implementing Partner |
| 3 | Lack of coordination amongst various stakeholders and partners involved in EE deployment in Iraq | Organizational | Without intra-government collaboration and consensus among stakeholders, rolling out of EE measures will be more challenging and less impactful.<br><br>*Level: Moderate*<br>*L = 1*<br>*I = 5* | The integration of stakeholder consultations in different outcomes will support EE deployment in Iraq and staying in line with national strategies and programmes by other donors. The project management will include a steering committee comprising ministries and public entities involved in EE sector in addition to representatives from the private sector. Coordination responsibilities are also one of the pillars of EEC establishment, where it has been recognized during project development that continuous collaboration requires a dedicated focal point, mandated to ensure the alignment of the efforts put by different actors to promote EE in the buildings sector. | UNDP CO, in their capacity as the project?s Implementing Partner |

| # | Description | Risk Category | Likelihood & Impact | Risk Treatment / Management Measures | Risk Owner |
|---|---|---|---|---|---|
| 4 | Lack of cooperation by the private sector | Organizational | Without private sector cooperation, rolling out of EE measures will be more challenging and less impactful.<br><br>*Level: Moderate*<br>*L = 3*<br>*I = 3* | The private sector is a key player in the development of the buildings sector worldwide. Project developers are naturally profit-driven. They are required to comply with national laws but enforcing laws without their engagement could lead to their withdrawal from the market. Hence, the project will ensure engagement of the private sector by recognizing them as a partner in the establishment of EEC. The development of EEC as a PPP will help ensure that project and post-project EE-related activities can speak to the internationally changing market environment and encourage EEC to identify and promote new market opportunities and mutual benefit for project developers and end users. | UNDP CO, in their capacity as the project?s Implementing Partner |

| # | Description | Risk Category | Likelihood & Impact | Risk Treatment / Management Measures | Risk Owner |
|---|---|---|---|---|---|
| 5 | Government and/or international donors will not provide financial incentives for rolling out EE in buildings, or lack agreement on a suitable financing instrument | Financial | Without financial schemes and incentives, rolling out of EE measures will be more challenging and less impactful.<br><br>*Level: Substantial*<br>*L = 3*<br>*I = 4* | In its approach towards building upon existing work, the project does not intend to develop a new financing mechanism for EE in buildings, rather plans to engage with existing financing mechanisms and incentive schemes offered by the government and international donor agencies, loans facilitated by commercial banks, and ongoing initiatives by NGOs, to build the connection between the entities providing financing instruments and potential beneficiaries. Private sector engagement in the establishment of EEC will also support the engagement of investors and developers in the localization of codes and standards to ensure they?re well suited for the Iraqi buildings sector. | UNDP CO, in their capacity as the project?s Implementing Partner |

| # | Description | Risk Category | Likelihood & Impact | Risk Treatment / Management Measures | Risk Owner |
|---|---|---|---|---|---|
| 6 | The Government approves to the proposed framework but lacks the ability to effectively enforce the associating MVE procedure despite endorsement by stakeholders | Operational | Without a unified MVE procedure, the developed codes and standards cannot be operationalized.<br><br>*Level: High*<br>*L = 5*<br>*I = 5* | This risk will be mitigated by (1) demonstrating the national economic benefits of the proposed changes to encourage voluntary adoption, and (2) carrying out capacity building activities for public officials and EEC staff. The establishment of a linkage between the policies and the MVE procedure requires early involvement of related ministries, achieved by integrating stakeholder consultations in all project outcomes. Actual case studies that show costs and the associated savings by implementation of EE measures will be explored during exchange mission. Information will be disseminated as part of the broader knowledge sharing activity. | UNDP CO, in their capacity as the project?s Implementing Partner |

| # | Description | Risk Category | Likelihood & Impact | Risk Treatment / Management Measures | Risk Owner |
|---|---|---|---|---|---|
| 7 | Inability to establish EEC as a national focal point that has coordination mandates and a testing facility with procedure for inspection, labeling and certification | Operational | Without a focal point with tools for testing, some of the developed codes and standards cannot be operationalized.<br><br>*Level: Substantial*<br>*L = 2*<br>*I = 5* | To mitigate this risk, the project outcomes have been expanded such that the outcomes related to EEC establishment, the development of MVE procedure, and the establishment of a testing facility, are emphasized. The capacity building activities have also been expanded to ensure different stakeholders are trained on the use of testing equipment, buildings? inspection, and reporting in accordance with the proposed MVE procedure, such that the knowledge production is not confined within the institutional setup of the EEC.<br>In case the particular private sector company does not succeed in achieving its co-financing commitments, other similar companies are expected to utilize the deliverables from the projects. This includes investing in the areas related to the updated building code or the techniques adopted in the EEC building.<br>For public sector co-finance, the amount is mainly provided to cover salaries of existing permanent staff whose time will be used in the EEC establishment and operation, and the implementation of other project-related activities, such as improving the building code, participating in awareness campaigns, committees, training programmes, etc. In case the co-finance is not realized, the project team will seek to mobilize resources from other ministries, as relevant. | UNDP CO, in their capacity as the project?s Implementing Partner |

| # | Description | Risk Category | Likelihood & Impact | Risk Treatment / Management Measures | Risk Owner |
|---|---|---|---|---|---|
| 8 | Persistence of COVID-19 until project start and/or throughout project implementation, and/or spread of similarly communicable diseases among the population. | Other: Health | The implementation of the project during a pandemic can potentially lead to:<br>- Change in national priorities and context<br>- Procurement delays due to restrictions on imports<br>- Exposure risks for the project team, consultants, partners, and communities during implementation<br><br>*Level: Substantial*<br>*L = 5*<br>*I = 3* | In consideration of COVID-19, 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:<br>- 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.<br>- Procurement of material and goods for retrofitting activities will consists 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.<br>- The project will follow UN and host country regulations in terms of social distancing and travel restrictions, abiding by WHO guidelines for preventive measures.<br>In addition, the project will focus on virtual activities whenever possible, including online consultation meetings and capacity building | UNDP CO, in their capacity as the project?s Implementing Partner |

| # | Description | Risk Category | Likelihood & Impact | Risk Treatment / Management Measures | Risk Owner |
|---|---|---|---|---|---|
| 9 | Continuing security risks due to post-war challenges. | Other: Security | Lack of security imposes restrictions on mobility of people and goods. It also increases the risk of theft or damage, prohibiting the investment in equipment requiring upfront capital.<br><br>*Level: High*<br>*L = 4*<br>*I = 5* | UNDP has been implementing many projects during ISIS period between 2014 and 2017. The UNDP Country Office is communicating with the Government of Iraq and most of its ministries on a daily basis and an UNDP will follow the security arrangement of the UN mission in Iraq in accordance with the security regulations and policies of UNAMI and UNDSS. In addition, project staff will be within the Green Zone in Baghdad.<br>With regards to the investment in testing equipment, it has been agreed during stakeholder consultations that the testing facility will be situated in the EEC building. Security arrangement for the building will be developed if needed. | UNDP CO, in their capacity as the project?s Implementing Partner |

| # | Description | Risk Category | Likelihood & Impact | Risk Treatment / Management Measures | Risk Owner |
|---|---|---|---|---|---|
| 10 | Possible effects of climate change on the environment and living conditions in Iraq | Social and Environmental | Possible effects of climate change include:<br>- Increase in ambient temperature, leading to prolonged heat waves, erratic precipitation, higher than average temperatures and increased disaster intensity.<br>- Intense droughts, declining precipitation, desertification, salinization, and the increasing prevalence of dust storms may also be observed.<br><br>*Level: Moderate*<br>*L = 4*<br>*I = 2* | 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.<br>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.<br>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 | UNDP CO, in their capacity as the project?s Implementing Partner |

| # | Description | Risk Category | Likelihood & Impact | Risk Treatment / Management Measures | Risk Owner |
|---|---|---|---|---|---|
| 11 | Poor communities are economically affected by new EE requirements for buildings. | Social and Environmental | *Level: Moderate*<br>*L = 3*<br>*I = 3* | The Environmental and Social Management Framework (ESMF) requires the preparation of an ESMP at the beginning of the project. A participatory process will be undertaken with potentially affected communities to ensure that the proposed regulations will not affect vulnerable groups. This process will also ensure that awareness is raised on cost savings from adopting EE measures. | UNDP CO, in their capacity as the project?s Implementing Partner |
| 12 | Limiting women?s ability to benefit from the proposed project and reproduce discriminations against women | Social and Environmental | *Level: Moderate*<br>*L = 3*<br>*I = 3* | A Gender Analysis and Gender Action Plan have been developed during project preparation. | UNDP CO, in their capacity as the project?s Implementing Partner |
| 13 | Occupational health and safety risks associated with the retrofitting activities | Social and Environmental | *Level: Moderate*<br>*L = 2*<br>*I = 3* | The ESMP will address the occupational health and safety risks associated with retrofitting of the EEC and include an Occupational Health and Safety Plan to ensure that workers are safe during the retrofitting activities. | UNDP CO, in their capacity as the project?s Implementing Partner |
| 14 | Potential health and safety risks to the local community from exposure to hazardous material | Social and Environmental | *Level: Moderate*<br>*L = 2*<br>*I = 3* | The ESMP will address the risks associated with handling, disposal or recycling of existing building materials and devices/appliances such as old CFLs and FLs containing mercury, old and energy inefficient ACs for the retrofitting of the EEC. It will describe measures on safe handling, storage, and disposal of these hazardous material. | UNDP CO, in their capacity as the project?s Implementing Partner |

| # | Description | Risk Category | Likelihood & Impact | Risk Treatment / Management Measures | Risk Owner |
|---|---|---|---|---|---|
| 15 | Release of pollutants to the environment from the improper storage, transport, and disposal of generated waste | Social and Environmental | *Level: Moderate*<br>*L = 2*<br>*I = 3* | The ESMP will ensure proper handling and disposal of non-EE material, appliances, and devices from the EE center retrofitting activities. This includes the proper design and implementation of the EE retrofits that includes concerns on the disposal or recycling of existing building materials and devices/appliances such as old CFLs and FLs (containing mercury) and old energy inefficient AC units (containing banned refrigerants). The ESMP will adopt best practices outlined in the Basel Convention and ICF International (2018) prepared for the USEPA-ODS Destruction in the United States and Abroad. | UNDP CO, in their capacity as the project?s Implementing Partner |

[1] WHO (2020). Considerations for public health and social measures in the workplace in the context of COVID-19 (https://apps.who.int/iris/rest/bitstreams/1277575/retri

**6. Institutional Arrangement and Coordination**

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

Implementing Partner: UNDP Country Office in Iraq

The Direct Implementation Modality (DIM) is UNDP?s standard working practice in Iraq. Hence, UNDP Iraq will be the Implementing Partner, responsible for project execution on behalf of the Government of Iraq and accountable for the disbursement of funds and the achievement of the project goals, according to the approved work plan.

Responsible Party: Regional Center for Renewable Energy and Energy Efficiency (RCREEE)

Given their mandate and on-going involvement in EE projects in Iraq, the UNDP will sign a Responsible Party Agreement with RCREEE, under which a team from RCREEE will be dedicated to supporting the

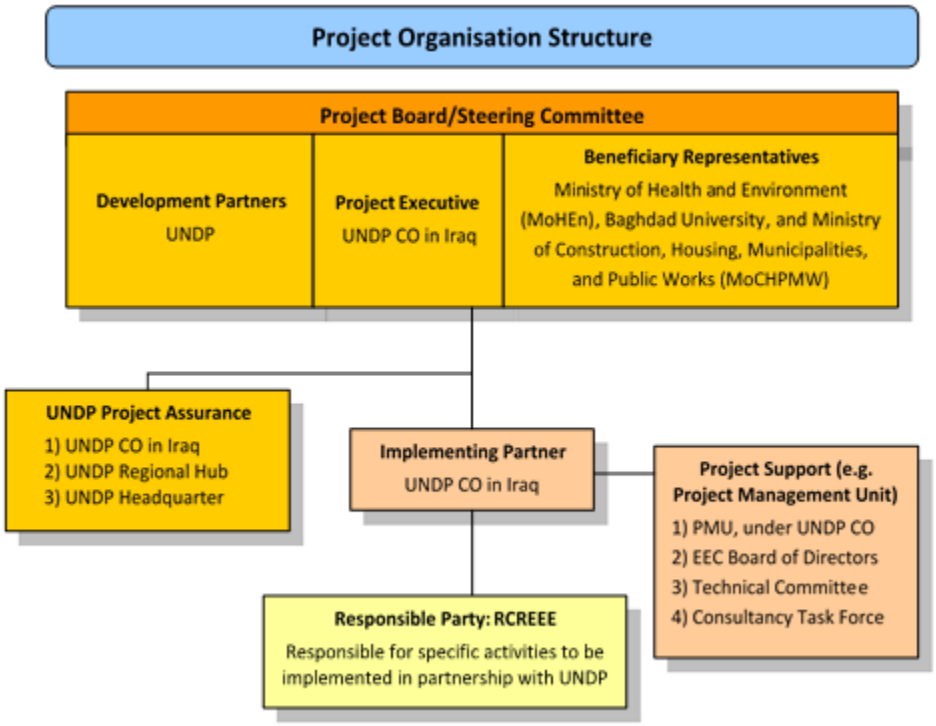
implementation of specific project activities, in partnership with the UNDP CO. RCREEE has regional experience which the project in Iraq can build upon. For example, RCREEE can support the design of surveys for the project team to use for data collection. RCREEE also has a large pool of EE experts in the region, and can support the development of ToRs and making recommendations for suitable candidates

Management arranagement: To ensure sound management of project implementation and continuous engagement of stakeholders in all project activities, the UNDP Iraq will establish the following committees at project start:

- Steering Committee/Project Board: Consisting of representatives from UNDP, the Ministry of Health and Environment (MoHEn), Baghdad University, and MoCHPMW, to oversee project development, governance, and M&E. Board meetings will be held annually. Additional meetings may be scheduled if required by the Responsible Parties during implementation.

- Technical Committee: Consisting of representatives from all the stakeholders, i.e. representatives of ministries, private sector, academia, and NGOs. This committee is expected to meet more frequently than the Project Board and will be responsible for looking into strategic issues to decide on the technical aspects of project implementation.

- Consultancy Task Force: Consisting of international & national experts taking the lead on specific technical assignments and collaborating to ensure the homogeneity of the following chart shows the proposed organizational structure for the project.



**7. Consistency with National Priorities**

Describe the consistency of the project with national strategies and plans or reports and assesments under relevant conventions from below:

NAPAs, NAPs, ASGM NAPs, MIAs, NBSAPs, NCs, TNAs, NCSAs, NIPs, PRSPs, NPFE, BURs, INDCs, etc.

*7. Consistency with National Priorities*. Describe the consistency of the project with national strategies and plans or reports and assessments under relevant conventions from below:
- National Action Plan for Adaptation (NAPA) under LDCF/UNFCCC

- National Action Program (NAP) under UNCCD

- ASGM NAP (Artisanal and Small-scale Gold Mining) under Mercury

- Minamata Initial Assessment (MIA) under Minamata Convention

- National Biodiversity Strategies and Action Plan (NBSAP) under UNCBD

- National Communications (NC) under UNFCCC

- Technology Needs Assessment (TNA) under UNFCCC

- National Capacity Self-Assessment (NCSA) under UNCBD, UNFCCC, UNCCD

- National Implementation Plan (NIP) under POPs

- Poverty Reduction Strategy Paper (PRSP)

- National Portfolio Formulation Exercise (NPFE) under GEFSEC

- Biennial Update Report (BUR) under UNFCCC

- Others

1) National Communications (NC) under UNFCCC,
2) Biennial Update Report (BUR) under UNFCCC,
3) National Determined Contribution (NDC) under UNFCCC
4) Technology Needs Assessment (TNA) under UNFCCC, and
5) Other.

**8. Knowledge Management**

**Elaborate the "Knowledge Management Approach" for the project, including a budget, key deliverables and a timeline, and explain how it will contribute to the project's overall impact.**

Part of ensuring the sustainability of project activities and prolonging its impact beyond the project duration is to maintain a system of monitoring, evaluation, knowledge sharing, and knowledge dissemination. The sustainability of these systems requires the ability to maintain uninterrupted operation during COVID. Hence, it is proposed that the Knowledge Management (KM) system takes the form of an online portal, reducing in-person contact and ensuring the work can proceed in case there continues to be restrictions on mobility during project implementation. The information contributing to knowledge production should be collected in an organized manner and constantly feeding the design of new interventions. The outcomes under this component serve to ensure that knowledge management, monitoring and evaluation are accounted for as independent tasks, but also integrated in all aspect of project implementation.

More details on the deliverables, timeline and budget for the KM scope of project implementation are presented in the Results Framework and multi-year workplan under Component 4.

**9. Monitoring and Evaluation**

**Describe the budgeted M and E plan**

| **Monitoring and Evaluation Plan and Budget:**<br>This M&E plan and budget provides a breakdown of costs for M&E activities to be led by the Project Management Unit during project implementation. These costs are included in Component 4 of the Results Framework and TBWP. For ease of reporting M&E costs, please include all costs reported in the M&E plan under the one technical component. The oversight and participation of the UNDP Country Office/Regional technical advisors/HQ Units are not included as these are covered by the GEF Fee. | | |
|---|---|---|
| **GEF M&E requirements** | **Indicative costs (US$)** | **Time frame** |
| **Inception Workshop and translation** | 9,000 | Within 60 days of CEO endorsement of this project. |
| **Inception Report** | None | Within 90 days of CEO endorsement of this project. |
| **M&E of GEF core indicators and project results framework** | None | Annually and at mid-point and closure. |
| **GEF Project Implementation Report (PIR)** | None | Annually typically between June-August |
| **Monitoring of Environmental and Social Management Framework (National SES Specialist)** | 20,000 ($4,000 annually for 5 years) | On-going |
| **Supervision missions** | 6,000 | Annually (costs for site visit meetings, audit mission travel and translation and printing of MTR and TE reports) |
| **Independent Mid-term Review (MTR)** | 60,000 | 01/03/2024 |

| **Monitoring and Evaluation Plan and Budget:**<br>This M&E plan and budget provides a breakdown of costs for M&E activities to be led by the Project Management Unit during project implementation. These costs are included in Component 4 of the Results Framework and TBWP. For ease of reporting M&E costs, please include all costs reported in the M&E plan under the one technical component. The oversight and participation of the UNDP Country Office/Regional technical advisors/HQ Units are not included as these are covered by the GEF Fee. | | |
|---|---|---|
| **GEF M&E requirements** | **Indicative costs (US$)** | **Time frame** |
| **Independent Terminal Evaluation (TE)** | 60,000 | 01/06/2026 |
| **TOTAL indicative COST** | **155,000** | |

**10. Benefits**

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

The objective of this UNDP-GEF project is to promote low carbon development in the Iraqi buildings sector. To achieve this objective, the project aims to induce change in two arenas. The first is the regulatory framework, which represents the set of policies, legal references and performance standards guiding the work of different parties in buildings construction and domestic appliances trading. The second is the environment within which the framework can be operational, including building the national capacity of stakeholders, supporting market readiness, and raising public awareness both on the benefits of EE adoption and the available financial schemes they can apply for to finance their EE activities. The project will also use all possible opportunity, i.e. workshops, meetings, trainings and awareness events, to promote diversity and gender balance. Balanced representation of relevant stakeholders will be ensured by reaching out to both men and women and different groups through appropriate communication means and encouraging their participation.

To realize this objective, the project will tackle regulatory barriers related to construction and retrofitting activities, as well as create connections with private actors and demand-side stakeholders for technical support and awareness raising. The connections include intra-government collaboration, public-private partnerships, and facilitating the communication between the banking sector and the public. The following figure presents the main hypothesis of the project.


## 11. Environmental and Social Safeguard (ESS) Risks

Provide information on the identified environmental and social risks and potential impacts associated with the project/program based on your organization's ESS systems and procedures

**Overall Project/Program Risk Classification***

| PIF | CEO Endorsement/Approval | MTR | TE |
|---|---|---|---|
| | High or Substantial | | |

**Measures to address identified risks and impacts**

Elaborate on the types and risk classifications/ratings of any identified environmental and social risks and impacts (considering the GEF ESS Minimum Standards) and any measures undertaken as well as planned management measures to address these risks during implementation.

Nine potential risks have been identified for this project, eight of which are assessed as MODERATE and one as SUBSTANTIAL. As a result, this project is rated overall as a SUBSTANTIAL Risk project. During the PPG, an ESMF, Stakeholder Engagement Plan and Gender Action Plan have been prepared to meet SES requirements. During project implementation, a SESA addressing potential socioeconomic impacts of upstream activities will be prepared, along with an ESMP that includes an Occupational Health and Safety Plan and a Waste Management Plan. In addition, the Contractor that will be engaged in the retrofitting activities will undergo a private sector risk assessment in line with UNDP requirements, which will include a SESP to ensure adherence to SES requirements. Co-financing, while not direct, has been addressed by the ESMF.

**Supporting Documents**

Upload available ESS supporting documents.

| Title | Module | Submitted |
| --- | --- | --- |
| **PIMS 6487 Annex 06 - SESP 23 May 2021-clean** | **CEO Endorsement ESS** | |

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

| | | | | |
|---|---|---|---|---|
| **This project will contribute to the following Sustainable Development Goal(s):**<br>SDG 7: Ensure access to affordable, reliable, sustainable, and modern energy for all.<br>SDG 11: Make cities and human settlements inclusive, safe, resilient, and sustainable.<br>SDG 13: Take urgent action to combat climate change and its impacts. | | | | |
| **This project will contribute to the following country outcome (UNDAF/CPD, RPD, GPD):**<br>STRATEGIC PLAN OUTCOME 2: Accelerate structural transformations for sustainable development.<br>UNSDCF OUTCOME 4.1: Strengthened and resourced policies and frameworks are implemented for managing natural resources (including trans-boundary issues), developing renewable resources, and increasing resilience to climate change, environmental stress and natural hazards, and man-made and natural disasters. | | | | |
| | **Objective and Outcome Indicators (no more than a total of 20 indicators)** | **Baseline** | **Mid-term Target** | **End of Project Target** |
| **Project Objective:** 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. | ***Mandatory*** *Indicator 1: GEF Core indicator 11*<br>Number of direct project beneficiaries disaggregated by gender (individual people) | Zero, since the project has not yet started | Female: 365<br>Male: 365<br>Total: 730 persons | Female: 1,400<br>Male: 1,400<br>Total: 2,800 persons<br>In-direct beneficiaries: 274,000 persons/year |
| | ***Mandatory*** *Indicator 2: GEF Core indicator 6*<br>GHG emission mitigated | Zero, since the project has not yet started | Zero, since EEC is not yet fully operational. | Direct emissions mitigated: 1,933 $tCO_2e$<br>Consequential: 1,798 $ktCO_2e$ |
| | *Indicator 3: GEF Sub-Indicator 6.3*<br>Energy saved in buildings that have been newly constructed or retrofitted following project development | Zero, since the project has not yet started | Zero, since EEC is not yet fully operational. | Direct energy saved: 5,223 GJ |
| **Project component 1** | **Enabling regulatory and institutional framework is designed to promote EE in the buildings sector, including the development of Buildings Energy Efficiency Codes (BEEC) and Minimum Energy Performance Standards (MEPS) for buildings** | | | |

| | | | | |
|---|---|---|---|---|
| **Outcome 1** Appropriate regulatory and institutional framework is designed to catalyze existing policies and programs for promoting EE in buildings, including the operationalization of the National Energy Efficiency Action Plan (NEEAP). | *Indicator 4:* The Executive Regulation for EE in Buildings in Iraq is developed | The Executive Regulation is not yet developed | First Draft of the Executive Regulation for EE in Buildings is developed and presented for stakeholders? consultation | Final Draft of the Executive Regulation for EE in Buildings is developed, incorporating comments by stakeholders, and submitted for government approval |
| | *Indicator 5:* The extent to which the outcomes of the NEEAP have been integrated in the buildings sector in different forms, such as operation manuals, technical recommendations, permitting procedure, education curricula, design aspects and contractual obligations | The NEEAP exists but the integration process has not yet started | NEEAP Work Plan for EE in Buildings is developed and action items are integrated in different templates and documentation, as relevant | Project examples to support that there were measures taken by decision makers and end-users based on this integration |
| **Outputs to achieve Outcome 1** | 1.1. An analysis of the existing policies, programmes and national plans is conducted, and an Executive Regulation for EE in Buildings is drafted and submitted for government approval.<br>1.2. An analysis of the NEEAP in Iraq is conducted, and the elements required for its operationalization is provided to support rolling-out EE development with a focus on the buildings sector. | | | |
| **Outcome 2** Internationally recognized BEEC and MEPS for buildings are selected and localized to become suitable for Iraq, including the associating Monitoring, Verification and Enforcement (MVE) procedure. | *Indicator 6:* BEEC suitable for buildings design in Iraq developed, with the associated labelling scheme and testing procedure | Iraq has a building code, with data on thermal insulation. It does not include EE codes and passive design standards | First draft of the BEEC is developed and presented for stakeholders' consultation | Final draft of the BEEC is developed, incorporating comments by stakeholders, and submitted for government approval |
| | *Indicator 7:* MEPS suitable for building material in Iraq developed, with the associated labelling scheme and testing procedure | The MEPS are not yet developed | First draft of the MEPS is developed and presented for stakeholders' consultation | Final draft of the MEPS is developed, incorporating comments by stakeholders, and submitted for government approval |

| | | | | |
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| **Outputs to achieve Outcome 2** | 2.1. Appropriate BEEC, including the associating labelling, certification scheme and testing procedure, is selected, localized, and submitted for government approval. This will include aspects of passive design and thermal insulation standards.<br>2.2. Appropriate MEPS, including the associating labelling, certification scheme and testing procedure, is selected, localized, and submitted for government approval. | | | |
| **Project component 2** | **The Energy Efficiency Center (EEC) is established 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 MVE procedure** | | | |
| **Outcome 3** Energy Efficiency Center (EEC) is established and capacitated to support the development of EE programs and applications in the buildings sector. | *Indicator 8:* EEC is operational in a building that has been retrofitted, and run by staff capable of providing the services in its mandate | The EEC is not yet established | The legal establishment of EEC is finalized, retrofitting of the building is completed, and key staff hired with clear job descriptions | EEC is fully operational, with trained staff and evidence of effectiveness in the buildings sector in Iraq, including sound management of all ongoing activities under this project |
| **Outputs to achieve Outcome 3** | 3.1. EEC is established, legally and with physical presence, and is operational as the focal point for promoting EE in the Iraqi buildings sector.<br>3.2. Staff at the EEC are capacitated to inform decision-makers, advise investors, raise public awareness, and deliver general and technical training on EE in buildings. | | | |
| **Outcome 4** Testing facility and certification programmes are established under EEC, in accordance with the proposed BEEC and MEPS, to support the implementation of the framework?s MVE procedure. | *Indicator 9:* Periodical market inspection is conducted using the equipment in the testing facility | No inspections are conducted, since the testing facility is not yet established | Testing equipment purchased and 10 persons trained on using each (50% men and 50% women) | The first annual inspection report is issued, with recommendations for decision makers and end-users |
| | *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 | No certifications obtained, since the MVE system is not yet developed | 20 persons, each conducting audits for at least two buildings and issuing reports per the MVE procedure (50% men and 50% women) | 100 persons, each conducting audits for at least two buildings and issuing reports per the MVE procedure (50% men and 50% women) |

| | | | | |
|---|---|---|---|---|
| **Outputs to achieve Outcome 4** | 4.1. A testing facility containing suitable equipment to measure energy consumption behavior in the buildings sector and perform regular inspection for buildings, in accordance with the proposed BEEC and MEPS, is established at the EEC and operated by EEC staff.<br>4.2. Certified Energy Management and Building Auditors Programmes are adopted by EEC, where Energy Managers are capacitated to conduct building inspections and make recommendations for optimizing EE in buildings nation-wide. | | | |
| **Project component 3** | **Individual and institutional capacity and EE technical knowledge and expertise are strengthened to enhance the ability of national parties to develop and operationalize EE policies, regulations, technical codes, and performance standards in the buildings sector** | | | |
| **Outcome 5**<br>Coordination between national parties for the enforcement of existing policies and strategies, including the Iraqi building code, is strengthened. | *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) | No staff trained, since the DFD is not yet developed | An overarching DFD is developed in consultation with the entities involved in its implementation, including representatives from the private sector | 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) |
| **Outputs to achieve Outcome 5** | 5.1. Develop a Data Flow Diagram (DFD) consistent with the proposed Executive Regulation for EE in Buildings to advocate intra-government collaboration and obtain consensus of the parties on the DFD and the manuals to use for staff training.<br>5.2. Policy-level training on the proposed regulatory and institutional framework for EE in buildings is conducted, targeting decision makers, public officials, and national experts. | | | |
| **Outcome 6**<br>The awareness of practitioners involved in the buildings sector, as well as end-users of electricity, on EE regulation and best practices is strengthened. | *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 | No workshops held, since the project has not yet started | 200 participants filling surveys, including 50 persons receiving ToT certification (50% men and 50% women) | 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) |

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|---|---|---|---|---|
| **Outputs to achieve Outcome 6** | 6.1. Technical training on EE in buildings is conducted targeting students, technicians, contractors, civil engineers, and architects. This will constitute a Training of Trainers (ToT) workshops to enhance the sustainability of knowledge sharing.<br>6.2. Awareness campaigns and events are organized to promote EE applications and programs, and relevant marketing material is developed to increase consumers? commitment to EE practices.<br>6.3. Existing financial schemes and incentive mechanisms dedicated to promoting EE buildings investments and attracting the engagement of the banking sector, are identified, promoted, and monitored. | | | |
| **Project component 4** | **Knowledge and expertise on EE in the buildings sector in Iraq is managed, guided by best practices from other countries, and the impacts of the developed regulatory and institutional framework is continuously monitored and evaluated** | | | |
| **Outcome 7**<br>A Knowledge Management (KM) system is developed, and best practices are catalogued through conducting exchange missions to other countries. | *Indicator 13:* Number of people gaining access to the online portal and surveyed to assess the effectiveness of the system and collect information on how to improve, disaggregated by affiliation, age and gender | Zero access, since the online portal is not yet developed | 500 persons (initial launching), including a short survey on the first visit | 2,000 persons, with annual surveys and evidence showing that the results are studied and taken in consideration when updating the system |
| | *Indicator 14:* Number of catalogues developed to show-case best practices in EE in buildings and reflect the knowledge obtained via exchange missions (one catalogue per mission) | No catalogues developed, since the exchange missions are not yet conducted | One catalogue documenting the knowledge obtained from at least one exchange mission | Two catalogues documenting the knowledge obtained from at least two exchange missions to two different countries (one mission per country) |
| **Outputs to achieve Outcome 7** | 7.1. A KM system is developed in the form of an online portal for the dissemination of EE in building practices, programs, code, and MVE procedure, on the national level.<br>7.2. Exchange missions to relevant regional or international countries with advanced experience in EE buildings deployment are conducted and a best practices catalogue is developed. | | | |

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| **Outcome 8**<br>A Monitoring and Evaluation (M&E) system is developed to track and document progress and impacts of EE initiatives and support the sustainability of EE interventions in the buildings sector. | *Indicator 15:* The M&E system is operational and EEC staff are capable of issuing annual reports to advise policy makers and practitioners on aspects of improving EE in the buildings sector in Iraq | No reports issued, since the M&E systems is not yet developed | One report issued by the M&E team in accordance with the institutional and inventory mechanisms developed | Three reports issued by the M&E team in accordance with the institutional and inventory mechanisms developed, with evidence of follow-up activities on the recommendations in earlier reports |
| **Outputs to achieve Outcome 8** | 8.1. Set up an institutional mechanism to revise and update building energy performance standards regularly, including the development of guidelines for enforcing EE measures in building.<br>8.2. Set up an inventory mechanism and database management system for national energy balance, detailed consumption statistics and related Greenhouse Gas (GHG) emission in the buildings sector to monitor and evaluate EE programs.<br>8.3. Capacity building to EEC staff on aspects of M&E, including database management, data collection and reporting, is conducted. | | | |

## ANNEX B: RESPONSES TO PROJECT REVIEWS (from GEF Secretariat and GEF Agencies, and Responses to Comments from Council at work program inclusion and the Convention Secretariat and STAP at PIF).

The following reviews were received from GEF Council Members and were taken into consideration during PPG phase. The following table presents the summary of comments received and the project team's response to each comment.

| Comments at PIF Stage | Response at PPG Stage |
|---|---|
| STAP Council Members: Canada | |

| Comments at PIF Stage | Response at PPG Stage |
|---|---|
| Given the high demand for electricity generation and the problem of power shortages, which factors were considered in the elaboration of this project for it to focus on energy efficiency rather than building renewable energy capacity? | Energy Efficiency (EE) is one of the priorities of both GEF and the Government of Iraq. It is an integrated climate friendly energy solution alongside a transition from fossil fuel based to renewable energy based energy source.<br><br>During concept note and PPG development, power generation using non-renewable sources was identified as one of the root causes of high GHG emissions in the buildings sector in Iraq. It was not included in the project strategy due to the following reasons:<br><br>- A project focusing on renewable energy development was implemented between 2014 and 2019, focusing on solar PV energy. Many capacity building activities were conducted successfully and are functional in the government. UNDP is still supporting many post-project activities to ensure sustainability of project outcomes.<br><br>- Focusing on EE is within the Climate Change Focal Area Strategy, under GEF7 programming directions, where one of the three fundamental objectives of the strategy is to *Promote innovation and technology transfer for sustainable energy breakthroughs.* The consultation with national stakeholders, including GEF OFP, highlighted ?*Accelerating Energy Efficiency Adoption*? as the highest priority among the four entry points identified by GEF to achieve this objective.<br><br>- High electricity consumption was identified as another root cause of high GHG emissions in Iraq, with buildings (residential and public) contributing to 73.8% of the demand on electricity. The focus of this project on EE aims to complement other projects and initiatives which dedicate resources to renewable energy development, since (1) it is more cost effective to enhance EE in buildings than generate and distribute more energy to meet the rising consumption; and (2) efficient consumption would reduce the overall demand on energy, irrespective of generation source.<br><br>- Combining both objectives under one project was deemed to be a complex approach that could jeopardize successful achievement of project outcomes. |
| Some gender elements were considered as part of the project design, but a more detailed gender plan can further help addressing gender equality and women and girls? empowerment through project activities. | A detailed Gender Analysis and Action Plan was prepared as part of the PPG development process (please see Annex 11 of the Project Document).<br><br>The findings of the analysis advised the development of project activities during the PPG phase, and should also advise project execution during implementation. |
| STAP Council Members: Germany | |

| Comments at PIF Stage | Response at PPG Stage |
|---|---|
| Germany would like to emphasize the importance of transmission and distribution losses as significant contributors to greenhouse gas emissions in the electricity sector. Germany asks to review the project document to assess the possibility to contribute to a reduction of those losses, and to include this as an additional component. In the short term, this could potentially mitigate larger amounts of GHG emissions compared to energy efficiency in appliances and the comparatively slow roll-out of building insulation. | Transmission and distribution losses were considered during PPG development. It was not included in the project strategy due to the following reasons:<br>- When developing the solution tree for the project, the reduction of GHG emissions on the supply-side was posed as a viable alternative, but is beyond the scope of this project given its primary focus on energy efficiency. Aiming to implement a project with components tackling supply-side (power generation) and demand-side (energy consumption in buildings) was deemed to be a complex approach that could jeopardize successful achievement of project outcomes.<br>- Baseline assessment and stakeholder consultations indicated that administrative losses (electricity consumed by unmetered and unbilled end-users) is the highest form of losses in Iraq. In a report by the Ministry of Electricity, the total losses were reported to be 60% in total: 6% generation, 5.8% transmission, and about 49% distribution. From the 49%, only 14% were reported to be technical losses, with the remaining 35% reported as administrative losses. Focusing on enhancing EE in buildings will lead to reducing the demand on metered generation capacity, as well as a reduction in administrative losses though the reduced demand in unmetered buildings. Moreover, the focus on regulations, building codes, and building audits, could have a spillover effect on enhancing the government?s ability to investigate and rectify the situation on metering and billing. |
| Germany would also ask to include additional information on the additionality and cost-efficiency of a testing facility for solar equipment in the project. | Output 3.4 in the PIF, which refers to equipping national laboratories with testing facilities for solar equipment, has been removed. In the Project Document, the outputs constituting the development of testing facilities in Iraq focus only on measuring energy consumption behavior in buildings and performing regular inspections to ensure the quality of building material. This is because testing of solar equipment is considered to be beyond the scope of this project. |
| Germany kindly asks to review the possibility of including capacity building measures for construction companies, civil engineers, technicians and crafts-persons involved in project implementation, as project success is directly linked to their technical expertise. | The results framework has been modified to emphasize the importance of technical training for practitioners, such that:<br>Outcome 6: The awareness of practitioners involved in the buildings sector, as well as end-users of electricity, on EE regulation and best practices is strengthened.<br>Output 6.1. Technical training on EE in buildings is conducted targeting students, technicians, contractors, civil engineers, and architects. This will constitute a Training of Trainers (ToT) workshops to enhance the sustainability of knowledge sharing. |

| Comments at PIF Stage | Response at PPG Stage |
|---|---|
| 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. | During PPG development, the consultations with stakeholders involved discussions on the pilot project and its location. The decision was to select a building for the establishment of the Energy Efficiency Center (EEC), then implement retrofitting activities to showcase the benefits of adopting EE measures in the buildings sector. Having EEC as a pilot is expected to allow for accurate data collection and monitoring of the change in energy consumption due to the adoption of EE measures, hence, enhance the usefulness of pilot implementation. The EEC building will also host the testing facility and will be used to conduct training sessions for practitioners. Therefore, it will be more accessible to the target groups than other public buildings.<br><br>Furthermore, private sector co-finance will be used to replicate the adopted EE measures in 30 buildings during the project?s lifetime. The replication aims to maximize the benefits of the GEF investment in EEC building and develop a knowledge base among practitioners and end users on retrofitting activities, the different EE measures and their benefit to reducing electricity consumption and GHG emissions. |
| STAP Council Members: United States | |
| Given security problems, limited private sector operations that could benefit from an energy efficiency center, and Iraqi budget constraints, we are concerned that there is a risk that many of the recommendations for this program may have trouble being implemented within a reasonable period of time. | UNDP Iraq has been implementing various projects such as the GEF funded project "Catalyzing use of solar PV Energy in Iraq" between 2014 and 2019 (GEF ID 5063). During that time there were many security problems including ISIS and the Iraqi national budget was reduced significantly due to the drastic drop in oil prices which accounts for 89 % of the Iraq revenues. During those circumstances UNDP Iraq managed to implement all the activities and deliverables with "Satisfactory" rating from the annual reports (PIRs) to the Mid Term Review. The response from the Iraqi Government was positive and the main deliverables were adopted by the Ministry of Electricity. The Renewable Energy law drafted by the project is now at the hands of the legislative authority "Shoura Council" and will be further sent to the parliament. The missing RE law in Iraq was one of the main gaps identified by private sector companies who are willing to invest in utility scale solar energy in the country. The project is currently undertaking its Terminal Evaluation. Strict security arrangement for UNDP and other UN agencies are in place to prevent and mitigate any situation in addition to the national staff and consultants that follow up all activities and deliverables. Events will be held in security cleared areas in Baghdad, Erbil or Amman depending on the circumstances. Events in Amman or other places in the region will support south-south cooperation to implement joint activities for greater impact. |

## ANNEX C: Status of Utilization of Project Preparation Grant (PPG). (Provide detailed funding amount of the PPG activities financing status in the table below:

| PPG Grant Approved at PIF: **150,000** | |
|---|---|
| ***Project Preparation*** | ***GETF/LDCF/SCCF Amount ($)*** |

| *Activities Implemented* | *Budgeted Amount* | *Amount Spent To date (24 Mar 2021)* | *Amount Committed* | *Balance Amount* |
|---|---|---|---|---|
| Preparatory Technical Studies & Reviews | 60,000.00 | 35,796.60 | 6,480.00 | 17,723.40 |
| Formulation of the UNDP?GEF Project Document, CEO Endorsement Request | 72,000.00 | 34,500.00 | 27,776.00 | 9,724.00 |
| Validation Workshop and Report | 18,000.00 | 5,933.72 | 0.00 | 12,066.28 |
| **Total** | 150,000.00 | 76,230.32 | 34,256.00 | 39,513.68 |

## ANNEX D: Project Map(s) and Coordinates

**Please attach the geographical location of the project area, if possible.**

Proposed location for EEC at Baghdad University (location coordinates: 33?16'15.8"N 44?23'07.8"E)


## ANNEX E: Project Budget Table

## Please attach a project budget table.

Please see Annex E enclosed.

**ANNEX F: (For NGI only) Termsheet**

Instructions. Please submit an finalized termsheet in this section. The NGI Program Call for Proposals provided a template in Annex A of the Call for Proposals that can be used by the Agency. Agencies can use their own termsheets but must add sections on Currency Risk, Co-financing Ratio and Financial Additionality as defined in the template provided in Annex A of the Call for proposals. Termsheets submitted at CEO endorsement stage should include final terms and conditions of the financing.

**ANNEX G: (For NGI only) Reflows**

Instructions. Please submit a reflows table as provided in Annex B of the NGI Program Call for Proposals and the Trustee excel sheet for reflows (as provided by the Secretariat or the Trustee) in the Document Section of the CEO endorsement. The Agencys is required to quantify any expected financial return/gains/interests earned on non-grant instruments that will be transferred to the GEF Trust Fund as noted in the Guidelines on the Project and Program Cycle Policy. Partner Agencies will be required to comply with the reflows procedures established in their respective Financial Procedures Agreement with the GEF Trustee. Agencies are welcomed to provide assumptions that explain expected financial reflow schedules.

**ANNEX H: (For NGI only) Agency Capacity to generate reflows**

Instructions. The GEF Agency submitting the CEO endorsement request is required to respond to any questions raised as part of the PIF review process that required clarifications on the Agency Capacity to manage reflows. This Annex seeks to demonstrate Agencies? capacity and eligibility to administer NGI resources as established in the Guidelines on the Project and Program Cycle Policy, GEF/C.52/Inf.06/Rev.01, June 9, 2017 (Annex 5).