



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 approaches, 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

11/17/2021

Expected Implementation Start

12/1/2021

Expected Completion Date

11/30/2026

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	3,092,009.00	27,310,000.00
Total Project Cost(\$)			3,092,009.00	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(\$)
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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). Outcome 2: Internationally recognized BEEC and MEPS for buildings are selected and localized to become suitable for Iraq, including the associating Monitoring, Verification and	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. (Key stakeholders: MoCHPMW, MoE, MoHEN, Prime Minister Advisory Committee for Energy) 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. (Key stakeholders: MoCHPMW, MoE, MoHEN, Prime Minister Advisory Committee for Energy) 2.1. Appropriate	GET	380,000.00	1,905,800.00

Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing(\$)	Confirmed Co-Financing(\$)
<p>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</p>	<p>Technical Assistance</p>	<p>Outcome 3: Energy Efficiency Center (EEC) is established and capacitated to support the development of EE programs and applications in the buildings sector.</p>	<p>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.</p> <p>(Key stakeholders: MoCHPMW, MoE, MoHEN, University of Baghdad)</p> <p>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.</p> <p>(40 trained staff (50% men and 50% women) (Min. 4 workshops) (Key stakeholders: MoCHPMW, MoE, MoHEN, University of Baghdad)</p>	<p>GET</p>	<p>690,000.00</p>	<p>3,987,890.00</p>

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.	<p>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.</p> <p>(10 persons trained) (50% men and 50% women. Min 2 workshops) (Key stakeholders: MoCHPMW, University of Baghdad, Ministry of Higher Education and Scientific Research, Ministry of Industry and Minerals)</p> <p>4.2. Certified Energy Management and Building Auditors Programmes are adopted by EEC, where Energy Managers are capacitated to conduct building</p>	GET	800,000.00	18,105,100.00

Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing(\$)	Confirmed Co-Financing(\$)
<p>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</p>	<p>Technical Assistance</p>	<p>Outcome 5: Coordination between national parties for the enforcement of existing policies and strategies, including the Iraqi building code, is strengthened.</p>	<p>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.</p>	<p>GET</p>	<p>689,771.00</p>	<p>1,058,670.00</p>
		<p>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.</p>	<p>(Key stakeholders: MoCHPMW, MoE, MoP)</p> <p>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.</p>			
			<p>(10 persons from each DFD entity trained, (50% men and 50% women. Min 4 workshops) (Key stakeholders: MoCHPMW, MoE, MoP)</p>			
			<p>6.1. Technical training on EE in buildings is conducted targeting</p>			

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	<p>Outcome 7: A Knowledge Management (KM) system is developed, and best practices are catalogued through conducting exchange missions to other countries.</p> <p>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.</p>	<p>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.</p> <p>(Key stakeholders: MoCHPMW, MoE, MoHEN)</p> <p>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.</p> <p>(Key stakeholders: MoCHPMW, MoE, MoHEN)</p> <p>8.1. Set up an institutional mechanism to revise and update building energy performance standards regularly, including the development of</p>	GET	385,000.00	952,900.00

Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing(\$)	Confirmed Co-Financing(\$)
				Sub Total (\$)	2,944,771.00	26,010,360.00
Project Management Cost (PMC)						
		GET	147,238.00		1,299,640.00	
		Sub Total(\$)	147,238.00		1,299,640.00	
		Total Project Cost(\$)	3,092,009.00		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	3,010,000.00
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
Recipient Country Government	Univeristy of Baghdad, Ministry of Higher Education	In-kind	Recurrent expenditures	1,000,000.00
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	3,092,009	293,741
Total Grant Resources(\$)					3,092,009.00	293,741.00

E. Non Grant Instrument

NON-GRANT INSTRUMENT at CEO Endorsement

Includes Non grant instruments? **No**

Includes reflow to GEF? **No**

F. Project Preparation Grant (PPG)

PPG Required **false**

PPG Amount (\$)

150,000

PPG Agency Fee (\$)

14,250

Agency	Trust Fund	Country	Focal Area	Programmin g 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 ₂ e (direct)	78300	531628	0	0
Expected metric tons of CO ₂ e (indirect)	156600	3978632	0	0

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

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

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

Total Target Benefit	(At PIF)	(At CEO Endorsement)	(Achieved at MTR)	(Achieved at TE)
Expected metric tons of CO ₂ e (direct)	78,300	531,628		
Expected metric tons of CO ₂ e (indirect)	156,600	3,978,632		
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	1,436,292,000		

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

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

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

Provide additional explanation on targets, other methodologies used, and other focal area specifics (i.e., Aichi targets in BD) including justification where core indicator targets are not provided

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
<p>Title in PIF: Promoting Carbon Reduction Through Energy Efficiency (EE) Techniques in Baghdad City</p> <p>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.</p> <p>Changed to:</p> <p><i>Title: Promoting Carbon Reduction Through Energy Efficiency (EE) Techniques in Iraq</i></p> <p><i>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.</i></p>	<p>The project title and objective have been changed to refer to 'Iraq' instead of 'Baghdad'.</p> <p>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.</p>

Changes made to project design during PPG development	Justification for change
<p>All reference to EE in appliances and equipment has been removed.</p>	<p>In the project's PIF, there were no activities included in any project outcome or output to improve EE in appliances. Reference to appliances was made broadly as part of the discussion on country challenges, but the baseline for appliances was not extensively studied during PIF development.</p> <p>To align the ProDoc/CEO ER sections with its results framework, we investigated the usefulness of adding new outcomes/outputs to address EE in appliances. We identified the following key challenges:</p> <p>1- Whereas building codes is the responsibility of the Ministry of Construction, the line ministry for appliances is the Ministry of Planning. Hence, combining both goals under the same project is challenging from a project management perspective and jeopardizes the ability to achieve tangible results in the area of institutional capacity building.</p> <p>2- EE in buildings focuses on national codes and working with local parties from the public and private sector to adopt EE designs and material. For appliances, the engagement on the national will be mostly be with consumers, since the majority of appliances in the market are imported. As above, combining top-down and bottom-up approaches in two developmental areas was considered to increase the risk of project success.</p> <p>3- Furthermore, the Central Organization for Standardization and Quality Control has already identified standards on several equipment, such as refrigerators, ACs etc. Although this process is not complete in Iraq for all appliances, but it is ongoing work which the project can engage with during implementation without the need for introducing additional outcomes/outputs under this new project.</p> <p>As a result of the baseline assessment and after further discussions with stakeholders during the consultation workshop conducted on June 10th 2020, reference to appliances was not included in the project description and the focus of outcomes and outputs was maintained on EE in buildings as proposed in the PIF.</p>

Changes made to project design during PPG development	Justification for change
<p>All reference to solar components has been removed. This includes the removal of Output 3.4 in the PIF:</p> <p>Output 3.4: Upgrade, enhance and certify one national testing laboratory and equip the laboratory with testing facilities for solar equipment.</p>	<p>This output refers to equipping national laboratories with testing facilities for solar equipment. During PPG development, the baseline for solar equipment testing was studied indicating the following developments:</p> <p>1- A solar PV lab station was provided to the Ministry of Science and Technology with measurement devices and software under the previous GEF-financed project titled Catalyzing the Use of Solar Photovoltaic Energy Project (PIMS 5137, GEF ID: 5063). This project has been implemented between 2014 to 2019. The lab measures the metrological conditions surrounding the solar panel such as temperature, humidity, dust etc. In addition, the solar panel temperature and electricity generation are measured for different technologies and angles.</p> <p>2- Al Mansour Factory (which is the only governmental factory assembling solar panels) has a "Solar flash test" for its panels and are the only entity authorized by the Standard and Quality Assurance Organization. The system measures the output performance of a solar PV module using a standard testing procedure at manufacturers to ensure the conforming operability of each PV module.</p> <p>Hence, the output on solar equipment testing was removed from the project results framework, enhancing the project's focus on improving EE in buildings.</p>

Changes made to project design during PPG development	Justification for change
<p>Component 1: Enabling policy, institutional, and legislative framework to support the development of EE programs and applications in the building sector.</p> <p>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.</p> <p>Have been changed to:</p> <p><i>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.</i></p> <p><i>Outcome 1: <u>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).</u></i></p> <p>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.</p>	<p>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.</p>
<p>Component 2: Establishment of energy efficiency center.</p> <p>Outcome 2: EE and sustainable measures are advanced and known for selected building types and equipments, and replicated in building investment.</p> <p>Have been changed to:</p> <p><i>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.</i></p> <p><i>Outcome 3: <u>Energy Efficiency Center (EEC) is established and capacitated to support the development of EE programs and applications in the buildings sector.</u></i></p> <p>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.</p>	<p>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.</p>

Changes made to project design during PPG development	Justification for change
<p>New outcomes have been added under Components 1 and 2:</p> <p><i>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.</i></p> <p>And</p> <p><i>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.</i></p>	<p>The inclusion of these two additional outcomes under serve to emphasize the work required to:</p> <p>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</p> <p>2) Purchase testing equipment ? using part of the investment budget allocated to Component 2, and capacitating EEC staff on the use of these equipment.</p> <p>Their separation as independent outcomes allow the project to add suitable indicators and facilitate the M&E procedure during implementation and audit visits.</p>
<p>Component 3: Strengthening individual and institutional national capacity development, expertise, building codes & standards and technical knowledge in the EE buildings sector.</p> <p>Outcome 3: Strengthened capacity on EE buildings knowledge and expertise in Iraq.</p> <p>Have been changed to:</p> <p><i>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.</i></p> <p><i>Outcome 5: <u>Coordination between national parties for the enforcement of existing policies and strategies, including the Iraqi building code, is strengthened.</u></i></p> <p><i>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.</i></p> <p>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.</p>	<p>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.</p>

Changes made to project design during PPG development	Justification for change
<p>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:</p> <p><i>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.</i></p> <p><i>Outcome 7: A Knowledge Management (KM) system is developed, and best practices are catalogued through conducting exchange missions to other countries.</i></p> <p><i>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.</i></p> <p>The change is accompanied by the allocation of \$485,000 for Component 4.</p>	<p>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.</p> <p>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.</p>

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.

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

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

1- Cause (1): Inefficiencies in the power generation capacity and the reliance on fossil fuel for energy production. This is combined with remarkably high records of distribution losses which is also linked to unmetered consumption and inefficiencies in tariff collection from end users. This is a major issue for the Government of Iraq and requires the development of projects to support EE on the supply-side.

2- Cause (2): Inefficient appliances dominating the market, leaving consumers with limited options to select from in terms of energy-efficient technologies. However, Iraq does not have a manufacturing capacity. The market for electric appliances relies on imported equipment. The intervention to tackle this root cause requires working with the importation authorities to develop a formula that will enable the enforcement of EE regulations on imported equipment without reducing the attractiveness of the country as a profitable market for international companies and manufactures.

3- Cause (3): High electricity consumption in buildings due to the adoption of designs and material that are neither energy-smart nor responsive to the national codes developed to ensure that buildings in Iraq are adaptive to the environment and resilient to climate change.

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

Please see below for the solution tree developed for this project.

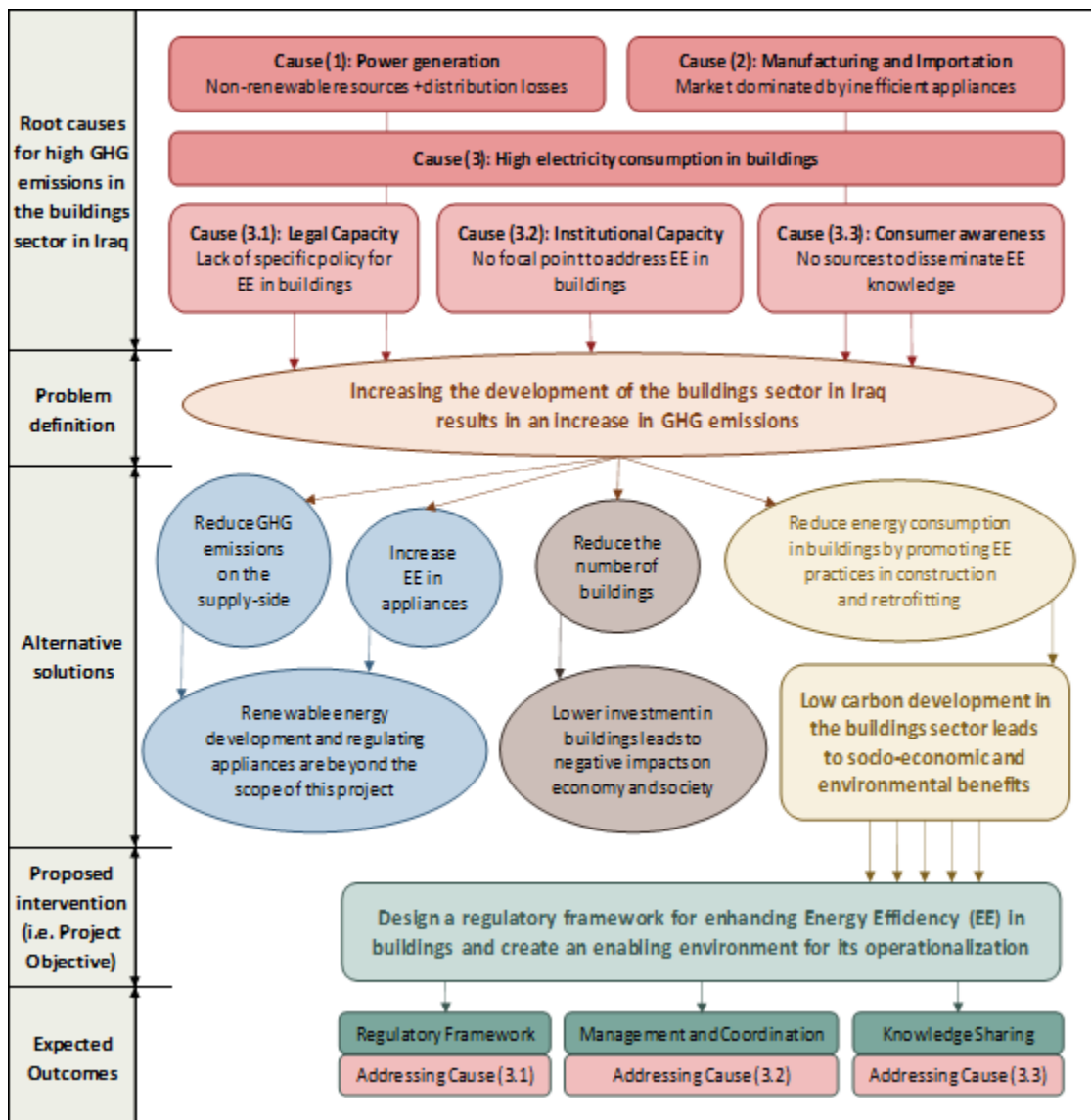


Figure 1: Solution Tree Diagram - An outline for problem definition and possible solutions

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.

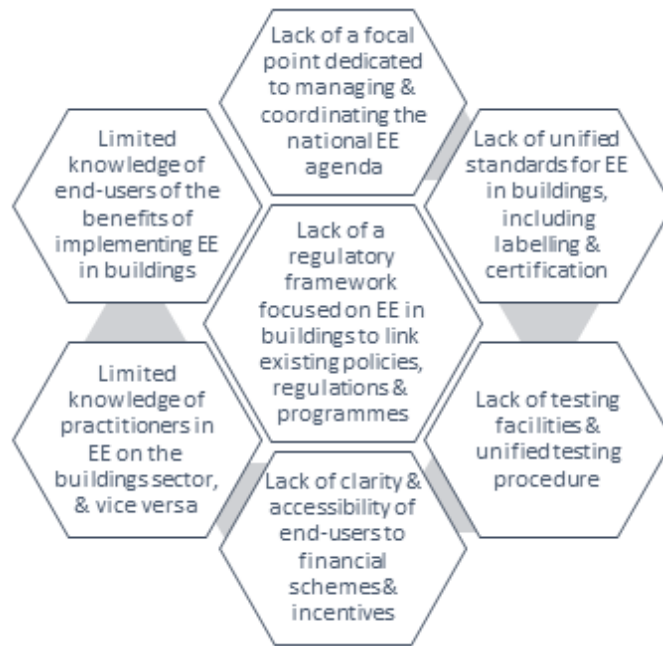


Figure 2: Barriers to EE enhancement in the Iraqi buildings

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

The detailed Procurement Plan for retrofitting of both buildings 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. All procurement will be done by UNDP. All investment related cost will be done by UNDP, which includes all procurement and contracting. 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), where government co-finance will be provided in the form of providing the building and covering staff salaries, while BRESC will support the operation with technical knowledge and expertise.

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

EEC building, and the second piloting building, for both to become a showcase for best-practice in EE in buildings. This assessment will also be used to develop the detailed Procurement Plan for the project.

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

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

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

As described, the establishment and operation of EEC during the project implementation 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 implementation. 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.

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

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.

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

sessions will also take in consideration the involvement of public and private sector actors, in order to provide participants with networking opportunities and ensure the sustainability of the collaboration between different national partners.

It is noted that the implementation of activities under this component will take into account the social distancing recommendations and prioritize the health and safety of trainers and participants in the choice of venue and maximum capacity for attendees. Hence, while training sessions would typically include 25-30 participants, possibly smaller numbers for technical training, the UNDP CO as the project's implementing partner will be open to adding more training rounds as may be needed, in order to reduce the number of participants per round as appropriate to the training venue. On-line meetings and virtual events will also be utilized to replace in-person meetings whenever possible to reduce the risks associated to COVID-19 on the project's progress and timeline.

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 implementation.

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

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

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

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

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

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

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

As a digital platform, it ensures the longevity of knowledge created. It also provides easy access. All those who receive training or come into contact with the project by other means can then refer to the portal for all relevant project information. The portal also amplifies the impact of project strategic communication. Instead of communicating large volumes of information, the project needs to communicate only two elements - the importance of energy efficiency, which should be self-evident to citizens in an energy starved country; and the address to access the portal. The portal also provides a means to assess the efficacy of strategic communication by evaluating visitors, measuring their engagement with the portal, and eventually capturing means to keep visitors engaged and updated, for example through mailing lists.

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

The 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: From Development Challenges to End Goal	End Goal	Contribute to GEF focal area: Climate Change Mitigation (CCM-1-3) / Contribute to SDGs: 7, 11 & 13							
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								
ToC Statement	Designing a regulatory framework that promotes enforcement of existing policies & regulations, facilitates the collaboration of relevant parties, & manages the dissemination of information between public entities, private partners & end-users of electricity, will enhance EE practices in new constructions & retrofitting activities, resulting in a reducing GHG emissions of buildings in Iraq								
Components	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		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		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		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		
Outcomes	Outcome 1: Appropriate regulatory & institutional framework is designed to catalyze existing policies & programs for promoting EE in buildings, including NEEAP operationalization	Outcome 2: Internationally recognized BEEC & MEPS for buildings are selected & localized to become suitable for Iraq, including the associated MVE	Outcome 3: Energy Efficiency Center (EEC) is established & capacitated to support the development of EE programs & applications in the buildings sector	Outcome 4: Testing facility & certification programmes are established under EEC to support the implementation of MVE procedure developed	Outcome 5: Coordination between national parties for the enforcement of existing policies & strategies, including the Iraq 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 & best practices is	Outcome 7: Knowledge Management system is developed & best practices are catalogued through conducting exchange missions to other countries	Outcome 8: Monitoring & Evaluation system is developed to track & document progress & impacts, of EE initiatives to support the sustainability of EE interventions	
Outcome ToC	Connecting existing regulations is more useful than creating another isolated island	Fair enforcement of EE policies & regulations requires standardizing the assessment criteria	Operationalizing the developed framework requires a focal point for EE in buildings	Fair enforcement of EE policies & regulations requires the ability to measure EE data	For the focal point to function effectively, the role of other parties needs to be defined	Engaging end-users in EE discussions will have an impact on their behaviour & investment	Sharing knowledge & learning from other countries is key to project sustainability	Regular monitoring of progress & evaluation of impacts ensures continuous	
Outputs	1.1. Draft an Executive Regulation for EE in Buildings & submit for government approval. 1.2. Identify and operationalize elements of EE in buildings in the NEEAP.	2.1. Select & localize BEEC for buildings & submit for government approval. 2.2. Select & localize MEPS for buildings & submit for government approval.	3.1. Establish EEC under a PPP modality to be the focal point for EE activities in Iraq. 3.2. Capacitate staff at EEC to advise end-users & deliver training on EE in buildings.	4.1. Establish a testing facility in accordance with the proposed BEEC and MEPS. 4.2. Develop a certification programme for auditors & inspectors.	5.1. Develop & operationalize a Data Flow Diagram for EE in buildings. 5.2. Conduct policy-level training on policy, strategy, programs & applications.	6.1. Conduct technical training on EE in buildings. 6.2. Organize events & awareness campaigns. 6.3. Identify & promote financial schemes & incentives.	7.1. Develop a Knowledge Management System for the dissemination of data on EE in building. 7.2. Conduct & document exchange missions.	8.1. Setup an institutional mechanism to revise EE regulations. 8.2. Setup a system for M&E of EE programs in the buildings sector. 8.3. Conduct M&E training for EEC staff.	
Key Assumptions	Existing policies & regulations are sufficient, but lacking focus & integration	Existing internationally recognized MEPS can be suitable for Iraq, with localization effort	It is possible to create a PPP in Iraq with the mandate of overseeing public sector activities	If a testing facility and certification system is established, the parties will rely on it for data	Entities involved in EE prefer collaboration over competition, but lack coordination	End-users are able to undertake EE measures if informed about the options & benefits	There are no restrictions by the government of Iraq on the dissemination of EE	There are no restrictions by the government of Iraq on the collection of EE data nation-wide	
Barriers to low carbon development in the buildings sector in Iraq	Legal, Policy & Regulatory Barriers EE Framework There are multiple policies & programmes that target EE, but no framework to connect them & streamline their goals EE Standards There are no MEPS for EE in the buildings sector in Iraq and the existing building code does not cover all aspects of EE in		Institutional Barriers Focal Point There is no entity with a mandate for promoting EE & facilitating intra-government collaboration on EE in buildings Testing & Certification There is no MVE system, no testing facilities & no database for trained professionals who can inspect EE in buildings		Barriers to Knowledge Production & Sharing Capacity Building There is lack of understanding of data flow & procedure within the public sector, private companies & practitioners End-user Awareness Awareness among end-users on the benefits of EE is low. There is no dissemination of data on financial schemes/ incentives		Management & Sustainability Knowledge Sharing There is presently no management system in place to expand the scope of knowledge sharing beyond direct beneficiaries M&E There is no M&E system to ensure that future projects can build upon the impacts & findings of ongoing projects		
Development Challenge	The residential & governmental sectors in Iraq contribute to more than 60% of the electricity consumption nation-wide. The energy mix results in high GHG emissions from electricity generation. The development of the buildings sector is a crucial part in national & international post-war reconstruction efforts. However, the development of the buildings sector in Iraq contributes to an increase in GHG emissions								

Figure 3: 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;

- Well-prepared and enforced building codes have long been a foundation of sound construction in countries with infrastructure which supports their development, progress, and quality of life of their citizens. Building codes result from a number of enabling conditions, namely: strong technical inputs at the public level; public entities national level engaged in the preparation and update of codes, and a regulatory environment at the local level able to encourage and enforce codes and educate consumers about their importance.
- The presence of such building codes in turn enables a number of down-stream effects, apart from the direct effect of improved buildings. Construction in accordance with well-formed building codes supports the development of technical skills and manufacturing capacity for materials in the country by providing a reliable demand for standardized work. This demand thrives only when enabling conditions of a long-term national vision, supported by national legislation and institutions are in place.
- Iraq is in the process of building after difficult decades that saw drastic losses in infrastructure, technical ability, and national institutional structure and capability. Construction in accordance with codes and standards almost always costs more upfront, but pays off in the long-run, in energy saved, in quality of building, and in capabilities within the society. In the absence of the enabling conditions mentioned above, building development in Iraq will follow the least-upfront cost path.
- The GEF is in a position to support a step change in the development of the built environment in Iraq by contributing to the establishment of building energy efficiency codes. Through this establishment, manufacturers, contractors and consumers can develop confidence in the long-term commitment to energy efficiency in the building sector.
- The difficult decades Iraq has faced have stalled the path that many countries have forged during that period, first adding energy efficiency requirements to their building codes, and then improving them as building techniques and building materials improved. As the condition improves in Iraq, the demand for dwellings is expected to experience rapid growth. These new dwellings could be energy efficient given the right enabling conditions.
- An energy efficient building is better than a non-energy efficient building in every way (lower operation cost, lower up-front capital cost for air-conditioning, more comfortable to occupy), but it requires the upfront investment of effort and cost, and requires understanding of the benefits and availability of the know-how and materials to build in an energy efficient manner. Making such buildings standard is the contribution that the proposed project can make.
- The project will build upon existing works, such as the establishment of a National Energy Efficiency Action Plan, already in place, and the voluntary recommendations of a National Building Code. These efforts have struggled in implementation for lack of a central focal point responsible for intra-government coordination. The project is designed to enable a holistic approach to EE in buildings develop building energy efficiency codes; promote their use; promote awareness and know-how; establish the mechanisms to ensure dissemination and sustainability of their use, for example, by establishment of the EEC.

- For the reasons mentioned above, the current environment is ripe for intervention of the propose project, and UNDP-GEF are uniquely placed to address the issues that have held back EE in the building sector in Iraq thus far. There are a number of factors that contribute to the timeliness of the project and UNDP's ability to execute. These can be summarized as:

- o The expected increase in the built environment
- o The high energy consumption of buildings in Iraq due to the need for cooling
- o The experience of UNDP in Iraq
- o The baseline technical capacity in the country and in the Government which can be applied towards energy efficiency
- o The complementary nature with other UNDP-GEF projects in country, and experience and credibility gained through those projects.

Co financing consists of two main parts, namely:

1. In kind governmental contribution:

- o The main co finance letter from the Government of Iraq, signed by the Ministry of Health and Environment dated on 7 July 2021 (attached in Annex) is in an amount of 3,010,000 USD.
- o The University of Baghdad will contribute with 1 million USD over the age of the project to support the Energy Efficiency Center. Co financing letter dated on the 11 of July from the University of Baghdad (UoB) has been obtained, which will cover:
 - Salaries of staff from UoB who are expected to work in the Energy Efficiency Center (EEC) on full time or part time basis to cover the administrative, management and operational needs of the EEC including security.
 - Since the building is owned by UoB, the main services such as electricity, water etc. will be covered by the university.
 - The land area of the building is more than 540 m2. However, the building consists of two floors with a total area of more than 1000 m2. In addition, the building is the heart of the capital Baghdad were renting costs would have been significantly high.

2. In cash Iraqi private sector contribution through BRESC and its partners consisting of \$ 23,000,000 for investment in EE technologies in buildings over the age of the project.

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	\$ 848,200	\$ 777,000	\$ 702,000	\$ 433,809	\$ 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: MoHE	\$ 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	\$ 4,507,000	\$ 7,447,800	\$ 7,362,800	\$ 7,094,609	\$ 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 relied on populating the GEF EE Tool with baseline data and assumptions obtained in consultation with national partners. According to this calculation, it is estimated that by 2046, this project will result in GHG emission reduction of about 3.8 Million tCO_{2e}, i.e. approximately 190 ktCO_{2e}/year. This value translates to 0.07% 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 tCO₂e/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/m², 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 m², 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. Based on the review of studies conducted in Iraq between 2016 and 2019, EE-related retrofitting activities in the buildings sector, such as thermal insulation, has the potential to achieve up to 68% reduction in the building's electricity consumption. As a conservative estimate, it is assumed that the retrofitting activities implemented as part of this project will result in 50% reduction in electricity consumption compared to the building's annual consumption without retrofitting, and that the impact will stay in effect for the full length of the post-project analysis period (20 years).
- The 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 m², 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:

- The total direct GHG emission savings from the retrofitting of 32 buildings during the 5 years' project implementation years is 531,628 tCO₂e. This amount will be realized at the end of the 20 years' lifetime for project activities, i.e. year 2046.
- The indirect bottom up emission savings due to project activities is calculated as 3,978,632 tCO₂e

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

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

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

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:

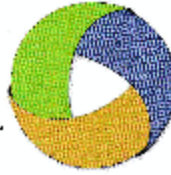
Strong potential exists for the project to be replicated in other countries in the region to address the problems of power shortages and bridge the gap between the need to expand the construction sector and the damaged energy infrastructure. As a country in post-war reconstruction phase, Iraq's success 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.

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

Annex I: Direct Implementation Modality (DIM) Support Letter from Iraq OFP



العدد : ١٢ / ١

التاريخ : ٢٠١١ / ١ / ١

No. 300

Date: 09/11/2021

Mr. Carlos Manuel Rodriguez,
CEO and Chairperson,
Global Environment Facility (GEF)
1818H, Washington D.C.

Subject: Promoting Carbon Reduction through EE Techniques in Iraq Project (GEF ID: 10392)

Dear Mr. Rodriguez,

This is in reference to Promoting Carbon Reduction through EE Techniques in Iraq Project.

In my capacity as the GEF Operational Focal Point (GEF OFP), I am pleased to note that the project is going through the final approvals that shall enable the start of implementation of this important initiative from early 2022. The project will substantially contribute towards meeting climate targets by promoting energy efficiency in Iraq. The project aims to promote low carbon development in Iraq through supporting the design of a regulatory framework for enhancing energy efficiency in buildings and the creation of an enabling environment for its operationalization.

I understand that a confirmation from GEF OFP is required on implementation arrangements of the project. In my capacity as the GEF OFP, I am pleased to confirm that UNDP is working closely with national institutions in Iraq under Direct Implementation Modality (DIM). These arrangements are crucial to re-establish the institutional capacities in Iraq. Therefore, I concur with DIM arrangements for the implementation of Iraq Project. The implementation arrangements are in line with other on-going projects in Iraq that shall ultimately enable the national institutions to adopt national implementation for future projects.

I take this opportunity to acknowledge GEF and UNDP for committing technical and financial resources for meeting the national priorities for climate actions and environmental management.

Please accept our sincerest gratitude and appreciation

Dr. Jasim Abdul-Jeez Humadi
Minister of Environment
Operational Focal Point of GEF
November, 9, 2021

نسخة منه الى

مكتب الوكيل الفني / للتفضل بالإطلاع... مع التقدير.
قسم علاقات البيئة الدولية // مع الأوليات لطفاً.

Copy to: Zena Ali Ahmad UNDP Resident Representative

E-Mail : moen.iraq@gmail.com
moen.iraq@yahoo.com

بغداد - الوزيرية - تقاطع العفريه
Baghdad - Alwaziriya - Almaghreb
Square

Annex J: Ministry of Education Letter for Selecting Pilot Demo Building

Original Letter

بسم الله الرحمن الرحيم

Republic of Iraq
Ministry of Education
Iraqi National Commission for
Education, Culture and Science



جمهورية العراق
وزارة التربية
اللجنة الوطنية العراقية
للتربية والثقافة والعلوم
العدد: ٢٥٤٥/٢/١١
التاريخ: ٢٠٢١/١١/٧

Date: / / 201

بسم اللجنة الوطنية العراقية للتربية والثقافة والعلوم اللجنة الوطنية العراقية للتربية والثقافة والعلوم اللجنة الوطنية العراقية للتربية والثقافة والعلوم

الى / وزارة العلوم والتكنولوجيا / الدكتور كمال حسين لطيف / المدير العام للطاقت
المتجددة / عضو اللجنة الوطنية العراقية للتربية والثقافة والعلوم المحترم

م / كفاءة الطاقة في العراق

تهديكم اللجنة الوطنية العراقية للتربية والثقافة والعلوم اطيب تحياتها

اشارة السى كتابكم ذي العدد ط م / ١٦٤٢ فسي ٢٠٢١/١٠/١٩
حصلت موافقة معالي الوزير / رئيس اللجنة الوطنية العراقية للتربية والثقافة والعلوم على اختيار مبنى
المديرية العام للتعليم المهني (احدى المديريات العامة التابعة الى ديوان الوزارة) والكاننة في منطقة
الاعظمية كموقعا يتم تأهيله وتحسينه من قبل برنامج الامم المتحدة الانمائي ليكون مكانا ملائما
ومعلما لباقي المؤسسات لرفع كفاءة الطاقة وتحسينها .

يرجى التفضل بالاطلاع واتخاذ اللازم واعلامنا ... مع التقدير

بما
علاء عبد عودة الوائلي
الامين العام للجنة الوطنية العراقية
للتربية والثقافة والعلوم
٢٠٢١/١١/٧

نسخة منه الى

- مكتب الوزير / قسم المتابعة / اشارة الى موافقة معالي الوزير بتاريخ ٢٠٢١/١٠/٢٨ / ليتفضل معاليه بالاطلاع ... مع التقدير
- اللجنة الوطنية العراقية للتربية والثقافة والعلوم / شعبة الالكسو / للمتابعة .

Baghdad - Iraq - AL-Bab alsharqi - Ministry of Education - Third floor

العراق - بغداد - الباب الشرقي - وزارة التربية - الطابق الثالث

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p o box 55577 iraq-baghdad Baghdad post office

Email: iraqnat@iraqnat.com

Email: iraqnat@iraqnat.com

Website: www.iraqnat.com

Unofficial translation

Republic of Iraq

Ministry of Education

Iraqi National Committee on Education Culture and Science

No.: 13/3/35245

Date: 7 November

2021

To

The Ministry of Science and Technology

Dr. Kamal Hussein Lateef, DG, Renewable Energy Directorate

The member of Iraqi National Committee on Education Culture and Science

Ref/ The Energy Efficiency in Iraq

Greeting from the Iraqi National Committee on Education Culture and Science.

In reference to your letter No. RE/1642 dated on 19 October 2021.

We would like to inform you that HE the Minister, Head of Iraqi National Committee on Education Culture and Science approved the identity of the building of Provincial Education under the umbrella of the Ministry of Education, which is located in Aladhamia, Baghdad to be retrofitted and improved by UNDP to make the building as a sample for other organizations regarding the enhancement of the Energy Efficiency

Best regards.

Alla Abid Ouda Al-Waali

General Secretary

The Iraqi National Committee on Education Culture and Science

CC

- The Minister's Office, Follow-up Dept., in reference to the approval of HE the minister dated on 28 October 2021.
- The Iraqi National Committee on Education Culture and Science

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 part of these consultations, the following took place from mid-2020 to-date:

? Two main consultation events were held in June 10, 2021 and Dec 17, 2021;

? Three site visits to the University of Baghdad (UoB) to identify building for the EEC and secure co financing letter;

? Virtual communication with all stakeholders including Ministry of Electricity, Ministry of Construction, Ministry of Housing and Public Works, Ministry of Higher Education and Scientific

Research, Ministry of Health and Environment as well as Baghdad Renewable Energy and Sustainable Center (BRESC); and

? Contact with The Regional Center for Renewable Energy and Energy Efficiency (RCREEE) for possible partnership during the implementation phase. HACT assessment is underway.

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

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

? Ministries of Planning, Electricity, Construction, Housing and Public Works, Higher Education and Scientific Research, Health and Environment;

? Private sector representatives including BRESC;

? Academic sector representatives including UoB;

? NGOs; and

? Local authorities of selected governorates may be engaged in a later stage in the implementation phase, mainly on consultation, training and awareness of policies and regulations.

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

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

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

The future roles of the stakeholders are detailed in the section on management arrangement, including:

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

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

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

Stakeholder Engagement Plan

1. Objectives of the Plan

This document constitutes the Stakeholder Engagement Plan (SEP) for the project 'Promoting Carbon Reduction Through Energy Efficiency (EE) Techniques in Iraq', which aims to serve as a guide for involving the different stakeholders, as well as those who have some type of interest, in the activities of the project during its entire life cycle.

The Plan's objectives are as follows:

- ? Facilitate continuous, open, and culturally appropriate communication with the different stakeholders in relation to their activities, progress, and impacts, and results of the project.
- ? Promote the equal participation of men and women in the different project activities.

Implementing this SEP will facilitate the project's development, reducing the risk for potential conflicts among the interested parties and maximizing the benefits of the research, training, awareness-raising, and education, as the main components of the project.

2. Identification of Stakeholders during the Preparation Phase (PPG)

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 entities. To ensure acceptance of the proposed project framework, the project concept 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, who can provide crucial support in raising national awareness to bring about the necessary behavior change for voluntary adoption of the proposed regulations prior to their enforcement.

During PPG development, consultation meetings were conducted with stakeholders from various entities whose representatives were invited to share their views on the challenges facing low carbon development in Iraq and their suggestions for promoting EE in the buildings sector. This feedback has been taken in consideration for developing the project strategy presented in the Project Document. The following is a list of the stakeholders who have been engaged in the discussion to-date, with the expectation to expand the consultation further during project implementation:

- ? Ministry of Construction, Housing, Municipalities and Public work (MoCHPMW)
- ? Ministry of Health and Environment (MoHEN), including representatives from the Department of International Relations, and the Climate Change Center
- ? Ministry of Electricity (MoE), including representatives from the Department of Environment, and the Section of Energy Efficiency
- ? Ministry of Higher Education and Scientific Research, including representatives from the Renewable Energy Directorate for Science and Technology, and College of Science at University of Renewable Energy
- ? Prime Minister Advisory Committee for Energy
- ? Ministry of Planning (MoP)
- ? Ministry of Industry and Minerals
- ? Ministry of Commerce

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.

Experience shows that civil society play a vital role in addressing sustainable energy development and environment challenges. Iraqi Government has the principal responsibility for meeting national commitments to the Convention on Climate Change and other global and regional environmental

agreements. The civil society will support in translating these commitments into effective action and programs on the ground and will help in ensuring the public endorsement of the National Energy Efficiency Action Plan as they can act as a trusted intermediary entity between communities, government ministries, and the private sector. They could also coordinate with donor-funded climate and energy activities. Close co-operation is also foreseen with all involved national stakeholders and regional and international organizations.

The project will work closely with domestic banks in a consultative approach to develop financial measures and incentive mechanisms attractive for domestic banks.

During implementation, the UNDP, in its capacity as an international donor 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 work of the Regional Center for Renewable Energy and Energy Efficiency (RCREEE), a center of excellence in the region, and a potential partner to UNDP. 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.

Regular consultation and meetings will be conducted to present the project outputs and results and collect feedback and approval of national entities to align the project deliverables with the needs of Iraqis. Lessons learned from the project will be shared with all key government and private stakeholders and finally approved and endorsed at the national level.

Other stakeholders will include researchers in the buildings and climate sectors, engineers and architects, relevant educational institutions such as the Iraqi universities, and any relevant associations.

3. Management of Complaints and Grievances

The management of complaints and grievances is necessary to respond to any legitimate concern, complaint, or grievance that may arise related to the project activities.

3.1 Roles and Responsibilities

These concerns, complaints, or grievances may be received by any person linked to the Project. As such, it will be the responsibility of the Implementing Partner to assign the persons who will serve as the link between those potentially affected and the project.

Addressing the complaints and grievances will be the responsibility of a team comprising a representative of the implementing partner (UNDP), a representative of MoHEN and a representative of the project technical staff. The team will be responsible for the following:

- Address any concern, complaint, or grievance received.
- Follow up with a response/solution to the concern, complaint, or grievance.
- Interact with the claimant.
- Close the complaint or grievance in accordance with the claimant.
- Monitor and evaluate the effectiveness of the mechanism.

3.2 Process

Table 1 presents the procedure for recording, managing, and closing out concerns, complaints, or grievances.

Table 1: Procedure for addressing complaints and grievances

Action	Procedure	Response Time	Form of Communication
Receipt of complaint	Record in the form designed for this action	Immediate	-Telephone -In person -Email
Step 1	Transfer recorded complaint to the team that addresses the complaints and grievances	Same day as recording the complaint	-Email
Step 2	Analyze the complaint	No more than 1 day after receiving the complaint	-Email -Telephone -In person
Step 3	Response/solution	In the case of complaints that are considered serious: immediately after analyzing the complaint or grievance, a preliminary response will be given to the affected party while investigation takes place. In the case of complaints/grievances that require a site visit, no more than 2 days after the site visit. In the case of complaints/grievances that are easily resolved, a response may be given immediately to the affected party.	-In person -Email -Telephone
Step 4	Closure	Immediately after the solution is implemented and feedback is obtained from the affected party.	-In person
Step 5 (if occurs)	Denial of closure by the affected party	After denial, alternatives will be provided to the affected party for a secondary solution or the corresponding legal procedure.	-In person

4. Project Stakeholder Engagement Plan

Table 2 on the following page presents the stakeholders who will be involved in implementation of the project and their type, in addition to their roles and the project activities they are expected to participate in. This forms the project's SEP which should be implemented and followed upon throughout the project life.

5. Monitoring and Evaluation

The Project Board / Steering Committee will monitor the compliance of the Stakeholder Engagement on a regular basis. This will be provided at least quarterly during the first three years of the project and biannually following that. The results of compliance with the SEP will be provided in the project annual report. The Terminal Evaluation will be carried out at the end of the project by the implementing partner at the national level and will include an evaluation of SEP implementation.

Table 2: Project Stakeholder Engagement Plan

Stakeholder	Stakeholder Type	Expected Role and responsibility in project implementation	Activities
UNDP	International organisation	<ul style="list-style-type: none"> ? Implementing Partner (GEF Executing Entity) for this project ? Responsible for project implementation in close collaboration with all stakeholders. 	<ul style="list-style-type: none"> ? Contribute to the implementation of all project activities/outputs ? Ensure implementation of the Gender Action Plan and Environmental and Social Management Framework ? Coordinate various donor and NGO efforts and ensure synergy with the project
MoHEN / Department of International Relations, and the Climate Change Center	Government agency	<ul style="list-style-type: none"> ? Focal point for GEF and environmental related issues such as GHG emissions, nationally and international agreements. ? Member of the Steering Committee/Project Board ? Overall responsibility for the project 	<ul style="list-style-type: none"> ? Follow up on all project activities

Stakeholder	Stakeholder Type	Expected Role and responsibility in project implementation	Activities
MoCHPMW	Government agency	<p>? Authorized ministry related to construction, housing, and municipalities, such that EE in buildings is within its mandate and thus will oversee EE activities</p> <p>? Developing legal frameworks, policies and regulations that are transferred to regional and local levels</p> <p>? Develop building codes in cooperation with other ministries.</p> <p>? The Energy Efficiency Center (EEC) will be established as a Public-Private Partnership (PPP) between the MoCHPMW and BRESC.</p>	<p>? Contribute to developing regulatory and institutional framework EE in buildings (Activity 1.1.3)</p> <p>? Participate in stakeholders? consultation meetings (Activity 1.1.4, Activity 1.2.3, Activity 2.1.4, Activity 2.2.4, Activity 8.1.2, Activity 8.2.2), validation workshop (Activity 1.1.6) and periodic meetings (Activity 1.2.5)</p> <p>? Confirm roles and responsibilities in the legal framework (Activity 1.1.5)</p> <p>? Sign PPP for the establishment of EEC (Activity 3.1.1)</p> <p>? Contribute to development of Data Flow Diagram (DFD) (Activity 5.1.3)</p> <p>? Potential participation in training on the proposed regulatory and institutional framework for EE in buildings (Activity 5.2.4)</p>
MoE / Department of Environment, and the Section of Energy Efficiency	Government agency	<p>? Endorsing the project to guarantee the alignment of project implementation with national strategies</p> <p>? Coordinate with MoCHPMW on developing building codes</p>	<p>? Participate in stakeholders? consultation meetings (Activity 1.1.4, Activity 1.2.3, Activity 2.1.4, Activity 2.2.4, Activity 8.1.2, Activity 8.2.2), validation workshop (Activity 1.1.6) and periodic meetings (Activity 1.2.5)</p> <p>? Confirm roles and responsibilities in the framework (Activity 1.1.5)</p> <p>? Contribute to development of DFD (Activity 5.1.3)</p> <p>? Potential participation in training on the proposed regulatory and institutional framework for EE in buildings (Activity 5.2.4)</p>

Stakeholder	Stakeholder Type	Expected Role and responsibility in project implementation	Activities
Ministry of Higher Education and Scientific Research / Renewable Energy Directorate for Science and Technology	Government agency	<p>? Coordinate with MoCHPMW on developing building codes</p> <p>? Benefit from research on EE in buildings</p>	<p>? Participate in stakeholders? consultation meetings (Activity 1.1.4, Activity 1.2.3, Activity 2.1.4, Activity 2.2.4, Activity 8.1.2, Activity 8.2.2), validation workshop (Activity 1.1.6) and periodic meetings (Activity 1.2.5)</p> <p>? Confirm roles and responsibilities in the framework (Activity 1.1.5)</p> <p>? Contribute to development of DFD (Activity 5.1.3)</p> <p>? Potential participation in training on the proposed regulatory and institutional framework for EE in buildings (Activity 5.2.4)</p>
Ministry of Planning (MoP)	Government agency	Coordinate with MoCHPMW on developing building codes	<p>? Participate in stakeholders? consultation meetings (Activity 1.1.4, Activity 1.2.3, Activity 2.1.4, Activity 2.2.4, Activity 8.1.2, Activity 8.2.2), validation workshop (Activity 1.1.6) and periodic meetings (Activity 1.2.5)</p> <p>? Confirm roles and responsibilities in the framework (Activity 1.1.5)</p> <p>? Contribute to development of DFD (Activity 5.1.3)</p> <p>? Potential participation in training on the proposed regulatory and institutional framework for EE in buildings (Activity 5.2.4)</p>
Ministry of Industry and Minerals Ministry of Commerce	Government agency	Coordinate with the private sector and improve their engagement in the project when needed	<p>? Participate in stakeholders? consultation meeting is held to present the proposed legal framework (Activity 1.1.4) and validation workshop (Activity 1.1.6)</p> <p>? Confirm roles and responsibilities in the framework (Activity 1.1.5)</p> <p>? Potential participation in training on the proposed regulatory and institutional framework for EE in buildings (Activity 5.2.4)</p>

Stakeholder	Stakeholder Type	Expected Role and responsibility in project implementation	Activities
Regional Center Renewable Energy and Energy Efficiency	Intergovernmental organisation	<ul style="list-style-type: none"> ? Center of excellence in the region ? Partner to support leveraging regional best practices in achieving the policy outcomes for Iraq. 	<ul style="list-style-type: none"> ? Potential for providing training for future inspectors (Activity 4.2.2 and Activity 4.2.3) ? Participate in awareness raising on EE regulation and best practices (Activity 6.1.3) and potential participation as trainers in ToT (Activity 6.1.4) ? Participate in knowledge sharing, success stories and social dialogue on EE buildings (Activity 7.1.3)
Private sector including SMEs, researchers, engineers and architects	Private sector	<ul style="list-style-type: none"> ? Support the scaling up of EE technologies introduced by the project, in accordance with the building code and other regulations. ? Play a vital rule in the operation and maintenance of the Energy Efficiency Center (EEC). ? Benefit from research on EE in buildings 	<ul style="list-style-type: none"> ? Potential for providing and participating in training for future inspectors (Activity 4.2.2 and Activity 4.2.3) and conducting audits for buildings (Activity 4.2.4) ? Potential participation in training on the proposed regulatory and institutional framework for EE in buildings (Activity 5.2.4) ? Participate in awareness raising on EE regulation and best practices (Activity 6.1.3) and potential participation as trainers in ToT (Activity 6.1.4) ? Participate in knowledge sharing, success stories and social dialogue on EE buildings (Activity 7.1.3)
BRESC	Private sector	<ul style="list-style-type: none"> ? Private company specialising in renewable energy and sustainability development and member in RCREEE representing the private sector. ? EEC will be established as a PPP between MoCHPMW and BRESC 	<ul style="list-style-type: none"> ? Participate in all activities related to Outcome 3 and Outcome 4 on the establishment of the EEC

Stakeholder	Stakeholder Type	Expected Role and responsibility in project implementation	Activities
Banking sector	Private sector	? Engagement to provide financial schemes and incentive mechanisms to promote EE buildings investments	? Participate Resource mobilization activities for implementation of financial mechanisms (Activity 6.3.2)
NGOs active with EE or climate change initiatives	Non-governmental organisation	? Help raise awareness and knowledge on EE ? Support in ensuring public endorsement of the NEEAP	? Participate in awareness raising on EE regulation and best practices (Activity 6.1.3 And Activity 6.2.4) ? Participate in knowledge sharing, success stories and social dialogue on EE buildings (Activity 7.1.3)
Women's Organisations	Non-governmental organisation	? Help raise awareness and knowledge on EE in gender inclusive manner	? Participate in awareness raising on EE regulation and best practices (Activity 6.1.3) ? Contribute to ensuring that awareness raising plan and campaigns and events are gender-sensitive and adopt different approaches to reach both men and women (Activity 6.2.2 and 6.2.4) ? Participate in knowledge sharing, success stories and social dialogue on EE buildings (Activity 7.1.3)
Individual consumers of electricity	Community	? Direct beneficiary of the project ? Engaged in the public dialogue on EE in buildings	? Participate in awareness raising on EE regulation and best practices (Activity 6.1.3 And Activity 6.2.4) ? Participate in knowledge sharing, success stories and social dialogue on EE buildings (Activity 7.1.3)
Donors of other projects (ex. World Bank)	Funding Agency / International organization	? Coordinate between the various relevant projects in Iraq to benefit from lessons learned and avoid duplication of activities	? Participate in knowledge sharing, success stories and social dialogue on EE buildings (Activity 7.1.3)

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):

During the project preparation phase, project risks have been analyzed and appropriate mitigation measures were identified. These are presented in the Risk Register Table below.

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

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

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

The key aspects of the climate change projects/scenarios at the project location[2] indicate that many of the climate change impacts which are already evident includes rising temperatures, intensifying droughts, declining precipitation, increasing salinization, and the heightening prevalence of dust storms. Observed changes in Iraq's climate are well established. Averaged over the 1950-2010 period, average temperatures have been increasing at a rate of about 0.7°C per century. Over the same period, average rainfall in the southeast part of the country has been decreasing at a rate of about 0.88 mm/month per century while the

number of rainy days has also been decreasing. The frequency of dust and sandstorms has also been increasing across Iraq, with dry and dusty winds from the northwest occasionally reaching 108 km/hour at 300 meters above ground from April to early June and again from later September through November. While the maximum number of annual dust storms during 1951-1990 was about 24, sources suggest that within the next ten years Iraq could witness 300 sand dust storms per year due to climatic changes within the region, especially decreases in annual rainfall, as well as the drying of marshland areas. Recurrent drought is also common throughout Iraq and has produced enormous economic, environmental, and social impacts. For example, the average number of drought episodes per decade in the Basrah region increased from 22 during 1990-2000 to 35 during 2000-2010,[2]² sparking the development of drought risk management plans in coordination with multilateral organizations.

The above climate change impact on the project is assessed to be moderate during project lifetime (Moderate risk - Impact from climate change may occur, but will be limited, transient or manageable. Financial, environmental and social underperformance or failure is unlikely. The system has the capacity to manage volatility, shocks, stressors or changing climate trends).

The project is located in Baghdad City. Baghdad City is exposed to climate change risks mainly related to increase of ambient temperature during the summer season which may reach more than 50 °C. Baghdad City also suffers from a clear state of surface urban heat island (SUHI), where the temperature difference between urban built areas in comparison with surrounding rural areas is about 17 °C and has a high risk level of climate change for B1, A2 and A3 IPCC scenarios for 2050 and 2100 from increased temperature levels. The most vulnerable groups are those with low-income levels, low access to infrastructure, elderly (above 65 years), young children (below 5 years) and the sick especially those in health centres. As a mitigation measure, the project will employ best practices of EE technologies in two selected pilot buildings to mitigate the impact of the increasing temperatures[3]³,[4]⁴.

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.

[2] See for example: Sissakian, V., Al-Ansari, N., and Knutsson, S., 2013. Sand and dust storm events in Iraq, *Natural Science*, Vol.5, No.10, 1084-1094; or Yu, Y., M. Notaro, O. V. Kalashnikova, and M. J. Garay, 2015, *Climatology of summer Shamal wind in the Middle East*, *J. Geophys. Res. Atmos.*, 120, doi:10.1002/2015JD024063

[3] Agha, O., and ?arlak, N., 2017. Analysis of meteorological drought in Iraq using the Reconnaissance Drought Index (RDI). International Journal of Advanced Research 5(3):473-479.

[4] ?Climate change risk assessment in Baghdad: examining population vulnerability? M F Abdulateef, H A S Al-Alwan, 2021

[5] ?Assessing of Climate Chang on Iraq using Meteonorm Weather Generator?, Iqbal H. Abd AlKareem, 2016

#	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. <i>Level:</i> <i>Substantial</i> <i>L = 3</i> <i>I = 5</i>	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. <i>Level:</i> <i>Moderate</i> <i>L = 4</i> <i>I = 3</i>	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. <i>Level:</i> <i>Moderate</i> <i>L = 1</i> <i>I = 5</i>	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	<p>Without private sector cooperation, rolling out of EE measures will be more challenging and less impactful.</p> <p><i>Level:</i> <i>Moderate</i> <i>L = 3</i> <i>I = 3</i></p>	<p>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.</p>	<p>UNDP CO, in their capacity as the project's Implementing Partner</p>

#	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. <i>Level:</i> <i>Substantial</i> <i>L = 3</i> <i>I = 4</i>	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. <i>Level: High</i> <i>L = 5</i> <i>I = 5</i>	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	<p>Without a focal point with tools for testing, some of the developed codes and standards cannot be operationalized.</p> <p><i>Level:</i> <i>Substantial</i> <i>L = 2</i> <i>I = 5</i></p>	<p>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.</p> <p>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.</p> <p>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.</p> <p>In case the co-finance is not realized, the project team will seek to mobilize resources from other ministries, as relevant.</p>	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	<p>The implementation of the project during a pandemic can potentially lead to:</p> <ul style="list-style-type: none"> - Change in national priorities and context - Procurement delays due to restrictions on imports - Exposure risks for the project team, consultants, partners, and communities during implementation <p><i>Level:</i> <i>Substantial</i> <i>L = 5</i> <i>I = 3</i></p>	<p>In consideration of COVID-19, the project team followed the following approach during PPG development:</p> <ul style="list-style-type: none"> - Regulations from the Government of Iraq and the United Nations Assistance Mission to Iraq (UNAMI) was followed, leading to the cancellation of the international consultant's field mission. - Preventive measures such as virtual meeting were used to ensure social distancing - Strict use of PPE during the events held physically. <p>The UNDP CO intends to follow the same approach during project implementation, and stay up-to-date with the new regulations or recommendations that may come out in the future. Similarly, the objective-level targets of the project have been revisited during PPG development to become more likely attainable. Additional mitigation measures were integrated in the project strategy as follows:</p> <ul style="list-style-type: none"> - COVID-19 pandemic emphasized the need to prioritize the health sector. By maintaining the goal of reducing the gap between energy supply and demand as a high priority, the project supports COVID-19 response by facilitating social distancing conditions for people, i.e. enhance the living conditions in buildings, as well as save electricity in the domestic sector to be diverted to more reliable usage in health facilities. - Procurement of material and goods for retrofitting activities will consist of locally available products, unless otherwise advised by the consultants and 	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. <i>Level: High</i> <i>L = 4</i> <i>I = 5</i>	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. 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	<p>Possible effects of climate change include:</p> <ul style="list-style-type: none"> - Increase in ambient temperature, leading to prolonged heat waves, erratic precipitation, higher than average temperatures and increased disaster intensity. - Intense droughts, declining precipitation, desertification, salinization, and the increasing prevalence of dust storms may also be observed. <p><i>Level:</i> <i>Moderate</i> <i>L = 4</i> <i>I = 2</i></p>	<p>The Climate Risk Analysis for the project shows that:</p> <ol style="list-style-type: none"> 1. The key aspects of the climate change projects/scenarios at the project location {7} indicate that many of the climate change impacts which are already evident includes rising temperatures, intensifying droughts, declining precipitation, increasing salinization, and the heightening prevalence of dust storms. Observed changes in Iraq's climate are well established. Averaged over the 1950-2010 period, average temperatures have been increasing at a rate of about 0.7°C per century. Over the same period, average rainfall in the southeast part of the country has been decreasing at a rate of about 0.88 mm/month per century while the number of rainy days has also been decreasing. The frequency of dust and sandstorms has also been increasing across Iraq, with dry and dusty winds from the northwest occasionally reaching 108 km/hour at 300 meters above ground from April to early June and again from later September through November. While the maximum number of annual dust storms during 1951-1990 was about 24, sources suggest that within the next ten years Iraq could witness 300 sand dust storms per year due to 	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	<i>Level: Moderate</i> <i>L = 3</i> <i>I = 3</i>	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	<i>Level: Moderate</i> <i>L = 3</i> <i>I = 3</i>	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	<i>Level: Moderate</i> <i>L = 2</i> <i>I = 3</i>	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	<i>Level: Moderate</i> <i>L = 2</i> <i>I = 3</i>	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	<i>Level: Moderate</i> <i>L = 2</i> <i>I = 3</i>	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

[6] 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>)

[7] See for example: Sissakian, V., Al-Ansari, N., and Knutsson, S., 2013. Sand and dust storm events in Iraq, *Natural Science*, Vol.5, No.10, 1084-1094; or Yu, Y., M. Notaro, O. V. Kalashnikova, and M. J. Garay, 2015, Climatology of summer Shamal wind in the Middle East, *J. Geophys. Res. Atmos.*, 120, doi:10.1002/2015JD024063

[8] Agha, O., and ?arlak, N., 2017. Analysis of meteorological drought in Iraq using the Reconnaissance Drought Index (RDI). *International Journal of Advanced Research* 5(3):473-479.

[9] ?Climate change risk assessment in Baghdad: examining population vulnerability? M F Abdulateef, H A S Al-Alwan, 2021

[10] ?Assessing of Climate Chang on Iraq using Meteorom Weather Generator?, Iqbal H. Abd AlKareem, 2016

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 arrangement: 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.

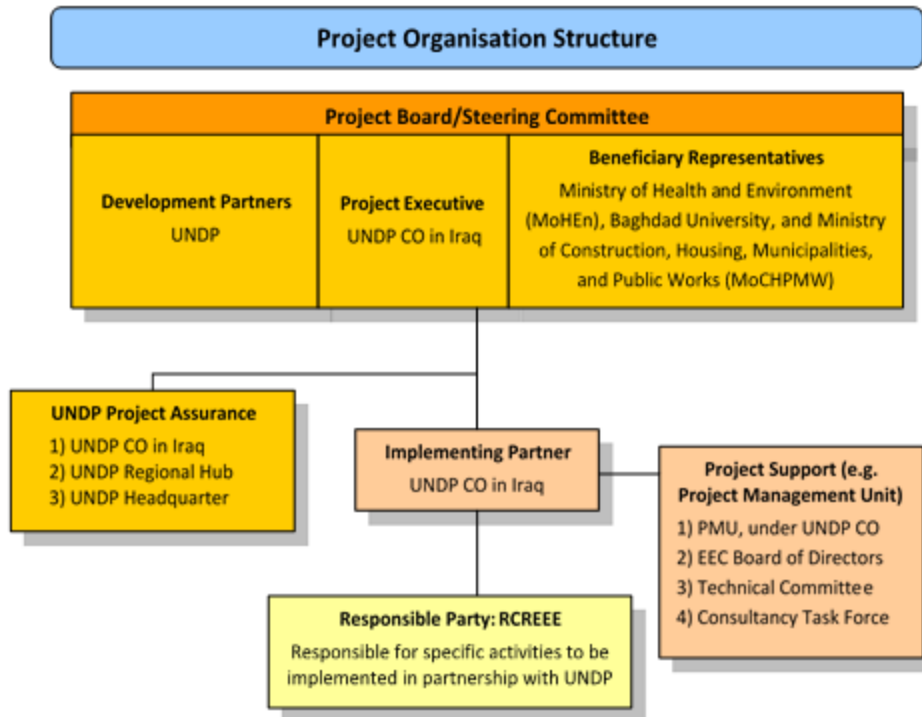


Figure 4: Project Organizational Structure

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:

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.

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

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

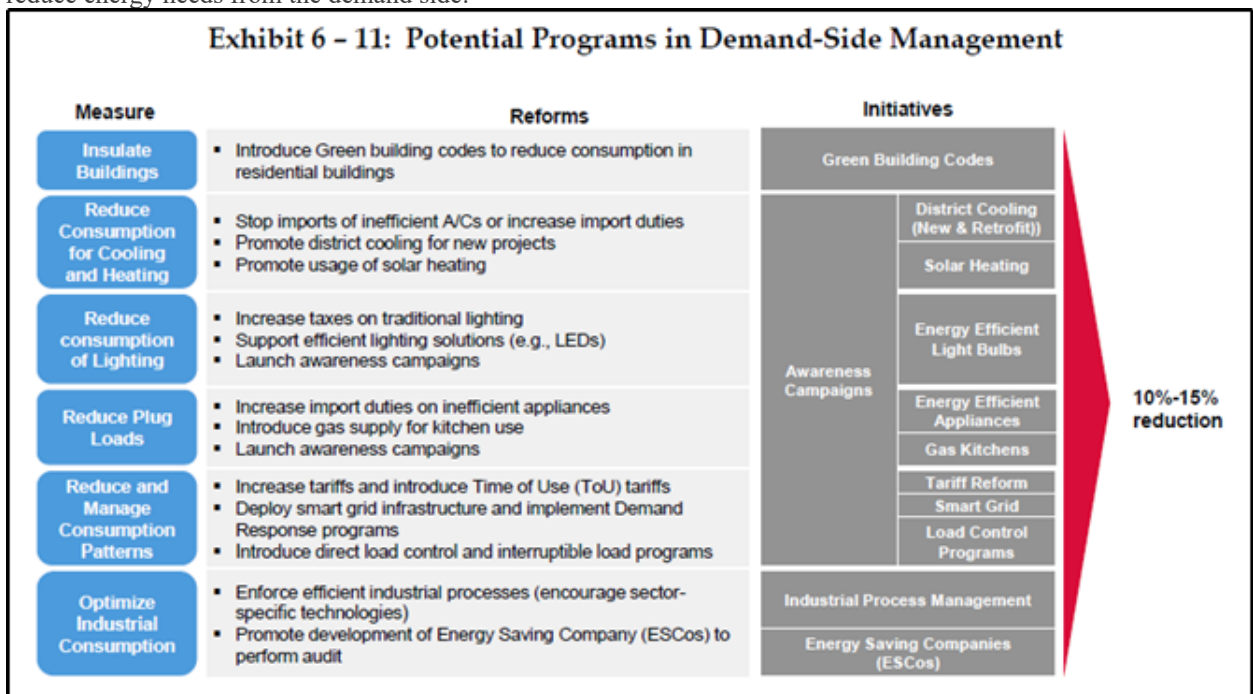


Figure 5: Potential Programs in Demand-Side Management as presented in the INES

- The Intended Nationally Determined Contribution (INDC) to the UNFCCC:

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

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:		
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 from the date of First Disbursement
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	01/06/2024
Independent Terminal Evaluation (TE)	60,000	01/09/2026
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.



Figure 7: Project hypothesis

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

At the national level the project:

- Helps reduce demand for electricity, thus relieving the burden on an already overburdened national electric system and allowing it meet a larger fraction of demand sooner.
- Reducing the amount of fuel needed for power generation, both at the national grid level and in diesel-powered mini-grids which are a main or backup source of electricity for a large portion of the population.
- Well-insulated buildings are more climate resilient, more comfortable to occupy in hot or cold weather.
- Increased vocational training for energy auditors as well as installers and contractors who will do the work.
- Of course, reduction of CO₂ emissions as a direct result of reduced energy use.

At the local level, the project:

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

At the individual house-hold level:

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

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).

<p>This project will contribute to the following Sustainable Development Goal(s): SDG 7: Ensure access to affordable, reliable, sustainable, and modern energy for all. SDG 11: Make cities and human settlements inclusive, safe, resilient, and sustainable. SDG 13: Take urgent action to combat climate change and its impacts.</p>				
<p>This project will contribute to the following country outcome (UNDAF/CPD, RPD, GPD): STRATEGIC PLAN OUTCOME 2: Accelerate structural transformations for sustainable development. 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.</p>				
	<p>Objective and Outcome Indicators (no more than a total of 20 indicators)</p>	<p>Baseline</p>	<p>Mid-term Target</p>	<p>End of Project Target</p>
<p>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.</p>	<p><u>Mandatory Indicator 1: GEF Core indicator 11</u> Number of direct project beneficiaries disaggregated by gender (individual people)</p>	<p>Zero, since the project has not yet started</p>	<p>Female: 365 Male: 365 Total: 730 persons</p>	<p>Female: 1,400 Male: 1,400 Total: 2,800 persons In-direct beneficiaries: 274,000 persons/year</p>
	<p><u>Mandatory Indicator 2: GEF Core indicator 6</u> GHG emission mitigated</p>	<p>Zero, since the project has not yet started</p>	<p>Direct emissions mitigated: 32,220 tCO2e Indirect: 241,129 tCO2e</p>	<p>Direct emissions mitigated: 531,628 tCO2e Indirect: 3,978,632 tCO2e</p>
	<p><u>Indicator 3: GEF Sub-Indicator 6.3</u> Energy saved in buildings that have been newly constructed or retrofitted following project development</p>	<p>Zero, since the project has not yet started</p>	<p>Direct energy saved: 87,048 GJ</p>	<p>Direct energy saved: 1,436,292 GJ</p>
<p>Project component 1</p>	<p>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</p>			

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).	<i>Indicator 4:</i> 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
	<i>Indicator 5:</i> 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. 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.	<i>Indicator 6:</i> 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
	<i>Indicator 7:</i> 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

Outputs to achieve Outcome 2	<p>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.</p> <p>2.2. Appropriate MEPS, including the associating labelling, certification scheme and testing procedure, is selected, localized, and submitted for government approval.</p>			
Project component 2	<p>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</p>			
Outcome 3 Energy Efficiency Center (EEC) is established and capacitated to support the development of EE programs and applications in the buildings sector.	<i>Indicator 8:</i> 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 40 trained staff (50% men and 50% women) with trained staff and evidence of effectiveness in the buildings sector in Iraq, including sound management of all ongoing activities under this project. Minimum of 4 workshops.
Outputs to achieve Outcome 3	<p>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.</p> <p>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.</p>			
Outcome 4 Testing facility and certification programmes are established under EEC, in accordance with the proposed BEEC and MEPS, to support the	<i>Indicator 9:</i> 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). Minimum of 1 workshop.	The first annual inspection report is issued, with recommendations for decision makers and end-users. Minimum of 2 workshops.

implementation of the framework's MVE procedure.	<i>Indicator 10:</i> 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). Minimum of 2 workshops.	100 persons, each conducting audits for at least two buildings and issuing reports per the MVE procedure (50% men and 50% women). Minimum of 6 workshops.
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. 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 nationwide.			
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 Coordination between national parties for the enforcement of existing policies and strategies, including the Iraqi building code, is strengthened.	<i>Indicator 11:</i> 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). Minimum of 4 workshops.
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. 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.			

<p>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.</p>	<p><u>Indicator 12:</u> 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</p>	<p>No workshops held, since the project has not yet started</p>	<p>200 participants filling surveys, including 50 persons receiving ToT certification (50% men and 50% women). Minimum of 4 workshops/events.</p>	<p>600 participants filling surveys, including 150 persons receiving ToT certification, with evidence showing that the results from previous surveys are studied and taken in consideration in planning new activities (50% men and 50% women). Minimum of 8 workshops/events.</p>
<p>Outputs to achieve Outcome 6</p>	<p>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.</p> <p>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.</p> <p>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.</p>			
<p>Project component 4</p>	<p>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</p>			
<p>Outcome 7 A Knowledge Management (KM) system is developed, and best practices are catalogued through conducting exchange missions to other countries.</p>	<p><u>Indicator 13:</u> 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</p>	<p>Zero access, since the online portal is not yet developed</p>	<p>500 persons (initial launching), including a short survey on the first visit</p>	<p>2,000 persons, with annual surveys and evidence showing that the results are studied and taken in consideration when updating the system</p>

	<i>Indicator 14:</i> Number of catalogues developed to showcase 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. 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.			
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.	<i>Indicator 15:</i> 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. 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. 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 project received comments from GEF Council Members, GEF Secretariat, and STAP. They were taken into consideration during PPG phase. The following table presents the summary of comments received on the project's PIF and the project team's response to each comment.

Comments at PIF Stage	Response at PPG Stage
Council Members: Canada	

Comments at PIF Stage	Response at PPG Stage
<p>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?</p>	<p>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.</p> <p>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:</p> <ul style="list-style-type: none"> - 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. - 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 <i>Promote innovation and technology transfer for sustainable energy breakthroughs</i>. The consultation with national stakeholders, including GEF OFP, highlighted <i>Accelerating Energy Efficiency Adoption?</i> as the highest priority among the four entry points identified by GEF to achieve this objective. - 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. - Combining both objectives under one project was deemed to be a complex approach that could jeopardize successful achievement of project outcomes.
<p>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.</p>	<p>A detailed Gender Analysis and Action Plan was prepared as part of the PPG development process (please see Annex 11 of the Project Document).</p> <p>The findings of the analysis advised the development of project activities during the PPG phase, and should also advise project execution during implementation.</p>
<p>Council Members: Germany</p>	

Comments at PIF Stage	Response at PPG Stage
<p>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.</p>	<p>Transmission and distribution losses were considered during PPG development. It was not included in the project strategy due to the following reasons:</p> <ul style="list-style-type: none"> - 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. - 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 through 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.
<p>Germany would also ask to include additional information on the additionality and cost-efficiency of a testing facility for solar equipment in the project.</p>	<p>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.</p>
<p>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.</p>	<p>The results framework has been modified to emphasize the importance of technical training for practitioners, such that:</p> <p>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.</p> <p>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.</p>

Comments at PIF Stage	Response at PPG Stage
<p>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.</p>	<p>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.</p> <p>During GEFSEC review of the CEO ER, the project team added a second public building to the retrofitting activities to be implemented using GEF funds. The second building will be a Training Center under the umbrella of MoEdu located in Baghdad.</p> <p>Furthermore, private sector co-finance will be used to replicate the adopted EE measures in 30 buildings during the project implementation. 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.</p>
<p>Council Members: United States</p>	
<p>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.</p>	<p>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.</p>

Comments at PIF Stage	Response at PPG Stage
<p>The United States expressed concern about the operational conditions of this project before and during the 57th GEF Council meeting. The subsequent response from the GEF Secretariat and UNDP acknowledged these complexities, citing the collective operational experience of UNDP Iraq as evidence that the project implementers could mitigate risk. We continue to be concerned about the operational conditions associated with this project and look forward to the following concerns being addressed in the subsequent version of this proposal.</p>	<p>Operational conditions associated with this project has been set out in the CEO ER including the organizational structure, stakeholder engagement plan, monitoring plan and risk mitigation measures.</p> <p>UNDP Iraq has continued to support the Government of Iraq through many projects including the stabilization efforts in the high-risk areas of post ISIS rehabilitation, support the elections in October 2021 as well as project in selected areas all over Iraq targeting vulnerable groups (such as marshland communities, IDPs etc.)</p>
<p>First, while EE capacity building is essential in the long term, it does seem poorly aligned with other, more pressing energy issues in Iraq, which include both major electricity shortages and rampant gas flaring. We recommend using the energy efficiency funds to do more to promote proper electric power grid O&M and gas infrastructure development to improve power grid performance to reduce flaring and resulting pollution. We also suggest incorporating energy benchmarking, metering, building commissions, measurement & verification, and energy performance contracting as part of the proposed project and alternative scenario.</p>	<p>There are currently large programmes being invested in the flare gas sector including the \$10 billion project with TotalEnergies (with a second phase of \$17 billion) and \$360 million with the International Finance Corporation.</p> <p>On the other hand, as stated in the Project documents, data from the MoE shows that the total electricity sold to end-users in 2018 is 39.59 GWh. Residential consumption amounted to 59% of the total consumption. Combined with public buildings, the buildings sector represents 73.8% of the total consumption. Although Iraq has some legislations in place in the building sector, investment in energy efficiency and endorsement of the building code is very limited.</p> <p>Therefore, given that the project budget is limited to around \$3 million, during the project design period, it was concluded with stakeholders that a greater impact will be achieved through focusing on the demand side of electricity consumption in the building sector.</p>

Comments at PIF Stage	Response at PPG Stage
<p>Second, Iraq is heavily fossil fuel dependent. For the energy generation of the program to succeed, UNDP should receive the support the Ministry of Electricity and Ministry of Oil. The proposed Energy Efficiency Center should be linked to the Prime Minister's officer in order for changes and improvements to be enforceable and effective.</p>	<p>The Ministry of Electricity, including representatives from the Department of Environment, and the Section of Energy Efficiency are one of the main stakeholders of the project and will be engaged through the project management unit.</p> <p>The mandate of the Energy Efficiency Center will be focusing on energy efficiency in buildings as a first phase and can be expanded or duplicated to include energy efficiency measures in the oil, electricity generation and transmission among other areas. Therefore, Ministry of Oil is not included as a stakeholder in this phase.</p> <p>The Prime Minister's office is linked to the project through the Prime Minister Advisory Committee (PMAC). The PMAC will be engaged throughout the project and will have a role in the Public Private Partnership that is planned to be establish with the role of leading the Energy Efficiency Center.</p>
GEF Secretariat	
<p>More details of financial measures and incentive mechanisms for the operation of the EE Center, after the GEF project implementation period is over, must be provided at CEO endorsement request.</p>	<p>The EEC will be established as a PPP to maximize the benefit of private sector involvement in EE applications in the buildings sector in Iraq. It will be located at Baghdad University where EEC operation will be financed using public funds. More details on the ownership, management arrangements and organizational structure have been provided under Component 2 description (Part II, Section 3).</p>
<p><u>A notice to the Agency:</u> <u>The implementation and execution roles on GEF projects are meant to be separate per policy and guideline. The GEFSEC will analyze any requests for dual role playing by an agency at the time of CEO endorsement and only approve those cases that it deems warranted on an ?exceptional? basis. We strongly encourage the agency to look at third party options as a preferred way forward. We also strongly encourage the agency to discuss any and all options for execution that do not include the government with the GEFSEC early in the PPG phase. The technical clearance of this PIF in no way endorses any alternative execution arrangement.</u></p>	<p>UNDP have considered this request of GEF. Given the capacity assessment in the country (current security, political and economic context as well as consultation with international agencies (including GEF implementing agencies), NGOs, academia, private sector etc.) and also given to the discussions with the government of Iraq, we have concluded that DIM modality is the best option.</p> <p>UNDP will implement the project under Direct Implementation Modality (DIM). However, some activities will be supported by the Regional Center for Renewable Energy and Energy Efficiency (RCREEE) which is a nonprofit, inter-governmental agency for Arab states in which Iraq is a member. RCREEE had been successfully engaged previously with UNDP Iraq through a GEF funded solar energy project.</p> <p>The national partners will be engaged widely through the project board and technical team that will be established during the first year of the project. Moreover, the University of Baghdad and other national partners will be the main administrative body for the Energy Efficiency Center (EEC).</p>

Comments at PIF Stage	Response at PPG Stage
<p><u>In addition, from October 2020 onwards, the GEF started to use revised review criteria with higher standards. To meet the standard, the agency needs to address more issues that are related to Theory of Change (TOC).</u></p> <p><u>Referring to STAP's primer on the issue of TOC - _https://www.stapgef.org/theory-change-primer , Please draw a chart to demonstrate TOC for this project and write a couple of paragraphs to explain the TOC.</u></p>	<p>The ToC diagram has been developed and is presented in the CEO ER (Figure under Part II, Section 3).</p>
STAP Comments	
<p>1. STAP agrees that the center could provide a good example of energy efficiency in buildings, but wonders if the project will also demonstrate energy efficiency technologies in other buildings types in Baghdad? To scale-up this project, it will be imperative to show an example of energy efficiency in different types of buildings.</p>	<p>During CEO ER review, the project modified the demonstration commitment to include a second public building to be retrofitted using GEF funds. This second pilot building will be a Training Center under the umbrella of Ministry of Education located in Baghdad. Meanwhile, the Energy Efficiency Center, as the first pilot building of the project, will be placed in Baghdad University campus in Baghdad. This building will also create a good case of public demonstration of EE benefits as well as providing opportunities in terms of academic context.</p>

Comments at PIF Stage	Response at PPG Stage
<p>2. Furthermore, there is a need to clarify which specific building types are the target of this project and to provide more specifics on the aspects of energy efficiency in buildings that this project seeks to address. Beyond the mention of thermal insulation and air conditioning, there is no specific on what aspects of energy efficiency in buildings the project will be focusing on: building design, retrofitting, heating and cooling, energy-efficient appliances, renewable energy source, energy-efficient lighting, energy-efficient electronics, etc. These details will be needed for developing a scalable and sustainable project?</p>	<p>The outcomes and outputs under Component 1 have been refined during the CEO ER stage to elaborate on the EE aspects targeted by the project. This includes:</p> <p>Output 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</p> <p>Output 2.2. Appropriate MEPS, including the associating labelling, certification scheme and testing procedure, is selected, localized, and submitted for government approval.</p> <p>The description of Component 1 provides the following additional details:</p> <p>BEEC serves to inform architects and contractors on aspects of passive design and help introducing smart solutions for building envelopes. 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.</p> <p>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 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.</p>
<p>3. There is limited information on what the proposed financial measure and incentive would look like or how it will be developed. STAP recommends that this information should be developed to address how this project will attract the necessary investments for continuity, scale-up, and sustainability.</p>	<p>The outcome tackling financial incentives has been revised during CEO ER stage to become more clear and relevant to the context in Iraq:</p> <p>Output 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.</p> <p>The description of Component 3 provides the following additional details:</p> <p>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.</p>

Comments at PIF Stage	Response at PPG Stage
<p>4. Furthermore, STAP recommends that there should be some close monitoring and due diligence of the private sector partner's capacity and record. BRESC was noted as a leading provider of services but minimal information about its activities is available online, and its performance record needs to be evaluated. Same to be said of the gender sensitivity partner NGO noted.</p>	<p>During the PPG period a detailed Stakeholder Engagement Plan (SEP) (presented as an annex to the Project Document) has been prepared which includes detailed information on organizations, UNDP grievance mechanism as well as an associated monitoring system. In addition, as part of the UNDP operational processes, a due diligence exercise will be performed for BRESC which will include a risk management strategy and a monitoring system.</p> <p>The mentioned gender sensitivity partner NGO is not an NGO but an electronic platform founded by a group of gender units from various Iraqi ministries, in collaboration with the UNDP in Iraq to create the first women's forum for a safe and green Iraq. The project will closely collaborate with stakeholders including ones working in gender subject as explained in the stakeholder engagement plan. Moreover, during the project preparation phase, a detailed gender analysis and action plan was prepared and provided as an annex to the project package. This document summarises the gender issues in Iraq as well as issues specific to the project context.</p>
<p>5. Further clarification is needed for the calculation of the Global Environment Benefits expected to accrue from this project. It is not clear how some of the numbers presented in the PIF were arrived at or the buildings that were used to calculate the 30 years emissions reduction.</p>	<p>The GHG calculation has been revised during CEO ER stage to adopt the tools offered by GEF for EE projects (GEF EE Tool v1.0). The GHG calculation sheet is presented in Annex 12 of the Project Document and the updated values for core indicators are inserted in the updated CEO ER.</p>
<p>6. For a project in which capacity building is an important aspect, the academic and research institutions should be included as part of the stakeholders and they should play a significant role.</p>	<p>In recognition of the role of academic and research institutions in project success, the UNDP and stakeholders have agreed to situate the EEC building in one of the state-owned buildings within the University of Baghdad (UoB). Additional details on the site selection are provided of the CEO ER (Annex H).</p> <p>Furthermore, 'academic sector representatives' have been included as one of the main groups of stakeholders which will be involved in the implementation of project components, especially in relation to capacity building and the establishment of the testing facility.</p>
<p>7. Incremental/additional cost reasoning: Cost reasoning is well defined except for aforementioned reservation about validating experience of private sector partner BRESC.</p>	<p>During the project preparation period, a detailed Stakeholder Engagement Plan (SEP) (presented as an annex to the Project Document) has been prepared which includes detailed information on organizations, UNDP grievance mechanism as well as a monitoring system. In addition, as part of the UNDP operational processes, a due diligence exercise will be performed for BRESC which will include a risk management strategy and associated monitoring system.</p>

Comments at PIF Stage	Response at PPG Stage
<p>8. Innovative, sustainability and potential for scaling-up: Scaling across the country and also ?scaling deep? (cultural shift in energy consumption behavior, particularly with abundant oil and gas which could again become more accessible) could have been better discussed.</p>	<p>The outcome tackling awareness raising on EE in buildings has been revised during CEO ER stage to become more clear and relevant to the context in Iraq:</p> <p>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</p> <p>Output 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.</p> <p>The description of Component 3 provides the following additional details:</p> <p>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.</p>
<p>8. Project Maps: Maps provided not georeferenced.</p>	<p>Project maps have been updates and provided in Annex E of the CEO ER.</p>
<p>9 Stakeholders: Stakeholders are noted but given the current political and social unrest in the country, UNDP should keep track of potentially disenfranchised stakeholders.</p>	<p>During project development phase, a detailed Stakeholder Engagement Plan (SEP) has been prepared and annexed to the Project Document. The project will cooperate with stakeholders as explained in this document. A gender analysis and action plan was also prepared and provided as an annex.</p> <p>The main stakeholders will be involved in at least in one of two levels of organizational structure. The first level will consist of the Steering Committee/Board for strategic decision and the second level will consist of a Technical Team that will discuss the technical issues of the project.</p>
<p>10. Gender: There is a fairly detailed section on gender aspects of this project but it relies on a particular NGO named WfSGI. Further performance metrics of this organization are needed.</p>	<p>WfSGI is an online platform in Iraq that is consist of relevant Iraqi government units. During the CEO ER development period, the project design team carried out a detailed stakeholder analysis which is presented in the Stakeholder Engagement Plan (SEP). The project will cooperate with stakeholders as explained in the stakeholder document which includes NGOs working in the gender subject. Moreover, a detailed gender analysis and action plan was prepared and provided as an annex to the project package. This Plan has most updated gender information for the country and in specific to the project context.</p>

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

If at CEO Endorsement, the PPG activities have not been completed and there is a balance of unspent fund, Agencies can continue to undertake exclusively preparation activities up to one year of CEO Endorsement/approval date. No later than one year from CEO endorsement/approval date. Agencies should report closing of PPG to Trustee in its Quarterly Report. The surplus is the result of shifting most meetings during PPG development into online modalities due to COVID-19 restrictions and the cancellation of the field mission by international consultants. The remaining balance of \$39,513.68 is intended to be used to perform a HACT assessment for a Responsible Party (RP) and to host a final event with stakeholders before the end of the year 2021.

PPG Grant Approved at PIF: 150,000				
<i>Project Preparation Activities Implemented</i>	<i>GETF/LDCF/SCCF Amount (\$)</i>			
	<i>Budgeted Amount</i>	<i>Amount Spent To date (31 July 2021)</i>	<i>Amount Committed</i>	<i>Balance Amount</i>
Preparatory Technical Studies & Reviews	60,000.00	47,193.40	2,880.00	9,926.60
Formulation of the UNDP/GEF Project Document, CEO Endorsement Request	72,000.00	40,160.00	30,056.00	1,784.00
Validation Workshop and Report	18,000.00	5,933.72	0.00	12,066.28
Total	150,000.00	93,287.12	32,936.00	23,776.88

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

<p>Equipment</p>	<p>Budget for the purchase of goods and material for retrofitting of the building to be selected for EEC establishment (during Year 2 and 3), retrofitting of a second public building (to be selected during the inception phase), and the purchase of testing equipment for establishing an EE laboratory (during Year 4). The Procurement Plan will be developed during Year 1 of implementation, when the exact location of the second building is finalized and an assessment for both buildings conducted to identify the required retrofitting activities, and therefore the goods and material to be purchased.</p>	<p>800,000</p>			<p>800,000</p>			<p>800,000</p>	<p>UNDP</p>
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Equipment	Communication expenses by the project team.					-		5,000	5,000	UNDP
Equipment	Software, computers, and IT tools for the project team.					-		4,000	4,000	UNDP
Contractual Services-Companies	Fees for the contractor (contractual services ? company) to undertake the retrofitting activities of EEC building, in accordance with the Procurement Plan to be developed during Year 1 of project implementation.		150,000			150,000			150,000	UNDP

Contractual Services-Companies	Fees for Contractual Services ? Companies to perform market analysis to identify and promote financial schemes and incentives which can help contractors and building owners finance the adoption of EE material and applying EE measures in their new and existing buildings. The responsibilities under this contract also include negotiating banks and other funding sources to mobilize resources for supporting national-level deployment of EE in buildings in Iraq.		150,000		150,000			150,000	UNDP
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Contractual Services-Companies	Fees for Contractual Services ? Companies to design project-specific KM and M&E systems, including the identification of the data sets that can be reflective of project achievements, and the associating templates, training manuals, catalogues, GHG inventory, and other tools which will be used by project staff and consultants during the project lifetime. The services under this contract will also include supporting the handover of these activities from the PMU to EEC staff at project end.				80,000				-	UNDP
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<p>Contractual services-Individual</p>	<p>Fees for contractual service (individuals) to undertake the following activities: - USD 50,000: Undertake a Strategic Environmental and Social Assessment (SESA) and develop the project's Environmental and Social Management Plan (ESMP) in accordance with the UNDP Guidelines for Social and Environmental Safeguards (SES). The SESA and ESIA/ESMP should be developed during Year 1 of project implementation. Additional costs for ESIA/ESMP implementation is included under the project's M&E budget. - USD 92,000: Develop the Procurement Plan for the project. This includes providing details on all procurement</p>	<p>142,000</p>			<p>142,000</p>		<p>142,000</p>	<p>UNDP</p>
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Contractual services-Individual	Fees for Contractual Services ? Individuals to design and implementation of a multi-year awareness raising campaign.			120,000		120,000		120,000	UNDP
Contractual services-Individual	Fees for Contractual Services - Individuals to develop an interactive online portal, including data collection strategies through gamification and regular surveys.			70,000				-	UNDP

Contractual services-Individual	Placement of required local Project Management and Support capacities and systems for project implementation and monitoring. This includes: - Local Project Manager (40 weeks/year over 5 years, costing about USD 60,000), - Local Project Coordinator (40 weeks/year over 5 years, costing about USD 25,000), and - Local Finance officer (24 weeks/year over 5 years, costing about USD 15,000).							100,000	100,000	UNDP
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International Consultants	<p>Fees for International Consultants involved in drafting the EE Executive Regulations and developing MEPS for EE in buildings. This includes:</p> <ul style="list-style-type: none"> - EE in Buildings Expert (20 weeks/year over 4 years, costing about USD 56,000), - EE Regulations and Policy Development Expert (20 weeks/year over 4 years, costing about USD 52,000), and - EE Standards Development Expert (20 weeks/year over 4 years, costing about USD 52,000). 	160,000				160,000		160,000	UNDP
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<p>International Consultants</p>	<p>Fees for International Consultants involved in advising the retrofitting of EEC building, the establishment of a testing facility, operationalizing the developed framework, developing certification and auditing programs, and providing ToT for EEC staff. This includes:</p> <ul style="list-style-type: none"> - Energy Audit Expert (40 days over 1 year, costing about USD 26,000), - EE Equipment and Testing Expert (40 weeks over 1 year, costing about USD 26,000), - Organizational Development and Operationalization Expert (20 weeks/year over 4 years, costing about USD 40,000), and - Capacity Building and ToT Experts in Energy Management and Building Audits (24 	<p>128,000</p>			<p>128,000</p>		<p>128,000</p>	<p>UNDP</p>
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<p>International Consultants</p>	<p>Fees for International Consultants involved in developing manuals for intra-government collaboration and training material for policy makers and end users. This includes: - Data Management Experts (35 weeks/year over 4 years, costing about USD 98,000), and - Capacity Building and ToT Experts (41 weeks/year over 3 years, costing about USD 62,000).</p>			160,000		160,000			160,000	UNDP
<p>International Consultants</p>	<p>Since this is a full-size project, USD 40,000 has been allocated for independent lead consultant to undertake the mid-term review and USD 40,000 for independent lead consultant to undertake the terminal evaluation.</p>					-	80,000		80,000	UNDP

<p>International Consultants</p>	<p>Placement of required international Project Management and Support capacities and systems for project implementation and monitoring. This includes:</p> <ul style="list-style-type: none"> - International Lead Technical Advisor (10 weeks/year over 5 years, costing about USD 25,000). 							<p>25,000</p>	<p>25,000</p>	<p>UNDP</p>
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<p>Local Consultants</p>	<p>Fees for Local Consultants involved in supporting the project team and facilitating the implementation of all activities under Component 1. This includes: - EE National Experts (43 weeks/year over 5 years, costing about USD 64,500), - Regulations Development National Specialist (36 weeks/year over 5 years, costing about USD 49,500), and - Training Facilitators and Capacity Building National Specialists (36 weeks/year over 5 years, costing about USD 36,000).</p>	<p>150,000</p>				<p>150,000</p>		<p>150,000</p>	<p>UNDP</p>
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<p>Local Consultants</p>	<p>Fees for Local Consultants involved in supporting the project team and facilitating the implementation of all activities under Component 2. This includes: - National Consultant with engineering background (40 weeks/year over 2 years, costing about USD 40,000), - National Consultant with quality assurance background (32 weeks/year over 3 years, costing about USD 38,400), - National Consultant with HR background (32 weeks/year over 3 years, costing about USD 32,600), and - Capacity Building and ToT National Specialists (40 weeks/year over 3 years, costing about USD 39,000).</p>		<p>150,000</p>			<p>150,000</p>		<p>150,000</p>	<p>UNDP</p>
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<p>Local Consultants</p>	<p>Fees for Local Consultants involved in supporting the project team and facilitating the implementation of all activities under Component 3. This includes: - Intra-Government Collaboration National Specialist (34 weeks/year over 4 years, costing about USD 47,600), - Media and Communication National Specialists (31 weeks/year over 4 years, costing about USD 43,150), and - Capacity Building and ToT National Specialists (30 weeks/year over 3 years, costing about USD 29,250).</p>		<p>120,000</p>		<p>120,000</p>			<p>120,000</p>	<p>UNDP</p>
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<p>Local Consultants</p>	<p>Since this is a full-size project, USD 20,000 has been allocated for independent national consultant to undertake the mid-term review and USD 20,000 for independent national consultant to undertake terminal evaluation. The budget for M&E Local Consultants also include USD 20,000 for hiring an E&S Specialist to implement the project's ESIA/ESMP .</p>					-	60,000		60,000	UNDP
<p>Trainings, Workshops, Meetings</p>	<p>Expenditures for organizing stakeholders' engagement conferences and round table discussions to reach consensus on the developed regulations and standards.</p>	50,000				50,000			50,000	UNDP

Trainings, Workshops, Meetings	Expenditures for organizing stakeholder consultation meetings and training to EEC staff to enhance their capacity to act as a focal point and develop their technical ability to operate and maintain the testing equipment.		100,000			100,000		100,000	UNDP
Trainings, Workshops, Meetings	Expenditures for organizing stakeholder consultation meetings and policy-level and consumer-level training, including ToT for professionals and practitioners.		120,000			120,000		120,000	UNDP
Trainings, Workshops, Meetings	Expenditures for organizing stakeholder consultation meetings and capacity building workshops for EEC staff to train them on using the developed KM and M&E systems.			30,000				-	UNDP

Trainings, Workshops, Meetings	Costs for translation and printing of the Mid-term Review (MTR) and Terminal Evaluation (TE) reports (as detailed in the M&E budget table presented in Section VI). Expenditures for organizing the inception workshop and other M&E related workshops and conferences (as detailed in the M&E budget table presented in Section VI).					-	7,000	7,000	UNDP
Travel	Travel expenses for missions conducted by international consultants contracted to perform activities under Component 1.	20,000				20,000		20,000	UNDP

Travel	Travel expenses for missions conducted by international consultants contracted to perform activities under Component 2.			20,000				20,000	0	UNDP
Travel	Travel expenses for missions conducted by international consultants contracted to perform activities under Component 3.			19,771				19,771		UNDP
Travel	Travel expenses for the exchange missions conducted by national stakeholders to other countries.					50,000			-	UNDP
Travel	Travel expenses for M&E related site visits (as detailed in the M&E budget table presented in Section VI).							-	6,000	UNDP
Office Supplies	Office supplies and stationery for the project team.							-	3,200	UNDP

Other Operating Costs	Costs for translation and printing of the Mid-term Review (MTR) and Terminal Evaluation (TE) reports (as detailed in the M&E budget table presented in Section VI).						-	2,000	2,000	UNDP
Other Operating Costs	Translation of documents and project reports from English to Arabic and Arabic to English, as appropriate.						-	10,038	10,038	UNDP
Grand Total		380,000	1,490,000	689,771	230,000	2,789,771	155,000	147,238	3,092,009	

ANNEX F: (For NGI only) Termsheet

Instructions. Please submit a 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 Agency 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).