PROJECT IDENTIFICATION FORM (PIF)

PROJECT TYPE: Full-sized Project
THE GEF TRUST FUND

Submission Date: October 8, 2008
Re-submission Date: February 26, 2009

PART I: PROJECT IDENTIFICATION

GEFSEC PROJECT ID[1]:
GEF AGENCY PROJECT ID: 4037
COUNTRY (IES): Syria
PROJECT TITLE: Energy Efficient Building Codes
GEF AGENCY (IES): UNDP
OTHER EXECUTING PARTNER(S): National Energy Research Centre (NERC)
GEF FOCAL AREA (S): Climate Change
GEF-4 STRATEGIC PROGRAM(S): CC 1- SP#1: Promoting Energy Efficiency in Residential and Commercial Buildings
NAME OF PARENT PROGRAM/UMBRELLA PROJECT:

INDICATIVE CALENDAR	
Milestones	**Expected Dates**
Work Program (for FSP)	Mar. 2009
CEO Endorsement/Approval	Mar. 2010
GEF Agency Approval	May. 2010
Implementation Start	Jun. 2010
Mid-term Review (if planned)	May 2012
Implementation Completion	May 2014

A. PROJECT FRAMEWORK (Expand table as necessary)

Project Objective:

The project objective is to reduce GHG emissions to achieve global environmental benefits through implementation of thermal and energy efficient building codes for new construction in Syria. The project intends to transform construction practice in Syria through introducing energy efficiency design, material and equipment in new buildings. The project also comprises a provision to adapt a new construction to changing climate, relying on synergism between climate change adaptation and mitigation measures.

Project Components	Indicate whether Invest., TA, or STA**	Expected Outcomes	Expected Outputs	Indicative GEF Financing*		Indicative Co-financing*		Total ($)
				($)	%	($)	%	
1. Identification, testing and demonstration of the use of new building materials and construction techniques	TA & Inv.	The knowledge, experience and trust of the key stakeholders on new construction materials and techniques and their energy saving opportunities built.	Cost-effective energy saving construction techniques & materials applicable for Syrian conditions identified. Selected techniques and materials tested and demonstrated in actual building sites. The information on results of the first demo projects shared	1,800,000	16%	9,600,000	84%	11,400,000
2. Enabling policy framework	TA	New EE building codes as well as a comprehensive legal and regulatory framework (incl. financial and other incentives) to facilitate their effective	An updated market assessment Updated standards for EE building design, materials, equipment and installation developed and submitted for Government approval,	600,000	50%	600,000	50%	1,200,000

[1] Project ID number will be assigned initially by GEFSEC.

		implementation and enforcement established	including passive solar design and mitigation of the urban heat island phenomena. Application decrees necessary to promote the implementation and enforcement of the EE Building Code drafted and submitted for Government approval.					
3. Strengthening the local institutional capacity to facilitate effective implementation of new EE building codes and facilitating the sustainability of the project results otherwise (including the M&E for adaptive management)	TA	Capacities of key public and private agents enhanced	A coordination system among relevant stakeholders established. Guidelines for implementing EE standards and practices in place. A set of awareness raising and training programs tailored to the specific needs of the key stakeholders, incl. governmental agencies, building developers other building professionals, code enforcement officials, building managers, architecture/ engineering school officials, and the general public implemented. Public & private building stakeholders and financial institutions mobilized	860,000	49%	900,000	51%	1,760,000
4. Project management				200,000	33%	400,000	67%	600,000
Total project costs				3.460,000	23%	11,500,000	77%	14,960,000

* LIST the $ by project components. The percentage is the share of GEF and Co-financing respectively to the total amount for the component.
** TA = Technical Assistance; STA = Scientific & technical analysis.

B. INDICATIVE CO-FINANCING FOR THE PROJECT (including project preparation amount) **BY SOURCE and BY NAME (**in parenthesis) if available, **($)**

Sources of Co-financing	Type of Co-financing	Amount (in $)
Project Government Contribution	Grant	8,000,000
Project Government Contribution(PPG)	In Kind	150,000
Bilateral Aid Agency (ies)	Grant	3,500,000
Total co-financing		11,650,000

C. INDICATIVE FINANCING PLAN SUMMARY FOR THE PROJECT ($)

	Project Preparation*	Project	Agency Fee	Total
GEF	140,000	3,460,000	360,000	3,960,000
Co-financing	150,000[2]	11,500,000		11,650,000
Total	290,000	14,960,000	360,000	15,610,000

***** Please include the previously approved PDFs and planned request for new PPG, if any. Indicate the amount already approved as footnote here and if the GEF funding is from GEF-3.

D. GEF RESOURCES REQUESTED BY FOCAL AREA(S), AGENCY (IES) SHARE AND COUNTRY (IES)*

GEF Agency	Focal Area	Country Name/ Global	(in $)			
			Project Preparation	Project	Agency Fee	Total
Total GEF Resources						

* No need to provide information for this table if it is a single focal area, single country and single GEF Agency project.

PART II: PROJECT JUSTIFICATION

A. STATE THE ISSUE, HOW THE PROJECT SEEKS TO ADDRESS IT, AND THE EXPECTED GLOBAL ENVIRONMENTAL BENEFITS TO BE DELIVERED:

A large portion of the energy demand, the continuous growth in energy consumption and related greenhouse gas emission in Syria is generated by the built environment, in particular the residential and services sectors. The share of the building sector in final energy use is rising. The government of Syria is constantly encouraging both the private and public sector to build new residences and commercial buildings in order to meet the dynamic national demography. Considering that the Energy-Related Carbon Dioxide Emissions are 16 million metric tons in Buildings Sector[3], the government of Syria is keen to promote GHG emission reduction in the building sector. Through this project, the government of Syria intends to develop, test, and implement a comprehensive energy efficient building code program adapting or matching international best practices to impose energy efficient building techniques in all new construction as well as to adapt thermal comfort to the predicted changing climatic conditions. Moreover, it is already agreed that during the present project, a portion of the national social housing programme

[2] In-kind contribution

[3] Source: The Syrian Ministry of Electricity & The Syrian Ministry of Petroleum & Mineral Resources, 2006

planned until 2010 will serve as a basis to test and demonstrate relevant energy efficient building techniques.

B. DESCRIBE THE CONSISTENCY OF THE PROJECT WITH NATIONAL PRIORITIES/PLANS:

To mitigate the rapid growth of energy consumption in Syria, the Syrian Government has set up the National Energy Research Center (NERC) in June 2, 2003. Furthermore, the Government has introduced a series of national programmes to promote energy efficiency and renewable energy.

The objectives of the present project are to fit into and reinforce this national policy framework. Actions and activities thereby proposed shall complement the energy policy of the Government.

It is expected that the development of all the activities related to the present project proposal will directly and indirectly contribute to the promotion of a renewed economical dynamism of the building sector through the creation of companies that will specialize in energy efficiency and/or in the manufacturing/marketing of thermally more efficient building materials. This should lead to the creation of new jobs and subsequently boosting direct and indirect investments in the construction and service sector.

In addition, the project complies with the Country Cooperation Framework and is in line with other climate change activities being implemented by the UNDP country office in Syria.

C. DESCRIBE THE CONSISTENCY OF THE PROJECT WITH GEF STRATEGIES AND STRATEGIC PROGRAMS:

The project is consistent with the GEF Climate Change Strategic Priority #1 “Promoting Energy Efficiency in Residential and Commercial Buildings ", which aims at promoting widespread adoption of energy-efficient technologies and practices in the built environment through increased market penetration of energy efficient building materials and adoption of the most energy-efficient building systems and equipment. The project also aims at adapting the built environment to predicted change in climatic conditions relying on synergism between adapation and mitigation measure to climate change.

D. OUTLINE THE COORDINATION WITH OTHER RELATED INITIATIVES:

Energy efficient building codes are a well established policy instrument in OECD countries where they contribute to a rational use of energy, mitigate growth in energy demand, contribute to reinforcing national energy security and reduce energy related greenhouse gas emissions. The government of Syria is keen to develop and implement an ambitious energy efficient building code strategy based from lessons learnt from European and Mediterranean Countries. GoS is aware and has been following with great interest the development of thermal building codes in Lebanon, the development of which has also been supported by the GEF. Syria encourages and wants to stimulate regional cooperative activities in neighboring Middle East countries in the field of sustainable energy. Over the past years, representatives of NERC have participated in regional workshops organized both by UNDP and by the European Commission, whose objectives are to encourage regional collaboration in improving the energy efficiency of the built environment. The project will be innovative as it addresses not only mitigation, but also adaptation to climate change

E. DISCUSS THE VALUE-ADDED OF GEF INVOLVEMENT IN THE PROJECT DEMONSTRATED THROUGH INCREMENTAL REASONING :

In the absence of the proposed GEF project, the Syrian Government through the National Energy Research Centre (NERC) will continue to promote the application of energy efficiency in buildings, including the implementation of the Thermal Insulation Code adopted in 2007. The required further development and enforcement of energy efficient building codes is not expected to take place at the same

pace and quality level, however, as if supported by a specific internationally supported project. This is mainly due to shortages in the needed technical and consultation support and the local capacities in the area of energy efficient building codes. Most government institutions do not have the capacity to go beyond the administrative regulatory activities and get into the implementation ground, which would lead to ineffective programme implementation. The challenge for the government is not only to overcome the barriers to the introduction of new building codes, but also to overcome the barriers to their actual implementation and enforcement due to the insufficient institutional capacity and lack of specific expertise for the implementation and management of building codes programme. This will put its limits on what regulatory intervention measures such as energy efficient thermal and building codes can achieve.

Through the GEF support, the Syrian government is looking for technical, policy and financial support as well as strategic and operational guidance in order to overcome the barriers listed above and thereby ensure effective design and implementation of energy efficient building codes in Syria.

F. INDICATE RISKS, INCLUDING CLIMATE CHANGE RISKS, THAT MIGHT PREVENT THE PROJECT OBJECTIVE(S) FROM BEING ACHIEVED, AND IF POSSIBLE INCLUDING RISK MEASURES THAT WILL BE TAKEN:

The possible risks to the successful outcome of the project are summarized below together with the suggested risk mitigation measures:

Risks	Remedial Actions
Market risks on demand and supply of EE materials and supplies: the quantity demanded may not be as high as anticipated (low consumer preferences) and/or the quantity supplied is not enough to meet the needs;	Public awareness campaign to ensure customers attractiveness. Promote and mobilize the national private sector investments' in EE building envelop.
Political risks (e.g. import restriction on EE building materials) and their influence on the supply side and Regional instability that impede recruitment of external expertise	Inventing, supporting the further development and encouraging, when applicable, the use of locally produced materials as alternatives Mobilize regional expertise
Unsustainable maintenance of energy efficient building materials after the end of the project	Through series of capacity building and awareness programme at the national level

G. DESCRIBE, IF POSSIBLE, THE EXPECTED COST-EFFECTIVENESS OF THE PROJECT:

The projection of cumulative benefits linked with the implementation of the project for the period 2010-2030 has been estimated to be up the 60 Mtons CO_2 [34] at a level of energy efficiency improvements and adaptation measures that are considered both technically feasible and economically justified. This implies that any incremental costs associated with energy efficiency investments can be compensated by the reduction in utility bills. Like in other similar projects, the achieved greenhouse gas reductions are highly cost effective. For the GEF allocation and assuming a conservative causality factor of 2 (40%), the GHG abatement costs for the GEF would still remain under US$0.2 per ton of CO_2 abated, thereby making this project economically and environmentally very attractive. For further details about the estimated energy efficiency gains and related CO_2 reductions, please see table 1 below.

[4] Total cumulative energy savings resulted from building code implementation in the new buildings estimated as 875000 TOE CO2 reduction predicted in 2030 = 2.6 Mtco2

Table 1 Estimated Impact of Different Building EE measures

items	**units**	**2010**	**2015**	**2020**	**2025**	**2030**
Insulation + efficient windows	Mtoe	0,06	0,18	0,36	0,70	0,88
Solar (active and passive design)		0,10	0,30	0,60	0,70	0,80
Auditing + others		0,05	0,10	0,17	0,30	0,50
Total		**0,21**	**0,58**	**1,13**	**1,70**	**2,18**
Total energy demand		26,00	34,00	45,00	55,00	65,00
the share of EE savings in buildings in the total energy demand	**%**	**0,80**	**1,69**	**2,50**	**3,08**	**3,35**
Cumulative savings from insulation and EE windows	Mtoe	0,06	0,49	1,55	3,69	**7,35**
Cumulative savings from all building EE measures	Mtoe	0,21	1,62	5,05	11,24	**20,20**
Cumulative CO_2 reduction from insulation and windows	MtCO2e	0,19	1,47	4,66	11,07	**22,05**
Cumulative CO_2 reductions from all building EE	MtCO2e	0,63	4,86	15,14	33,73	**60,61**

H. JUSTIFY THE COMPARATIVE ADVANTAGE OF GEF AGENCY:

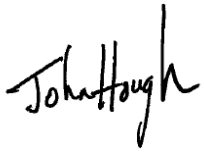
Providing capacity support to national energy efficiency policy is a recognized comparative advantage of the UNDP. Moreover, the project consists of capacity building/ technical assistance on energy efficiency that falls under UNDP's comparative advantages as presented in Annex L of the document GEF/C.31/5 erv.1.

III: APPROVAL/ENDORSEMENT BY GEF OPERATIONAL FOCAL POINT(S) AND GEF AGENCY (IES)

A. RECORD OF ENDORSEMENT OF GEF OPERATIONAL FOCAL POINT (S) ON BEHALF OF THE GOVERNMENT(S): (Please attach the country endorsement letter(s) or regional endorsement letter(s) with this template).

Eng. Imad Hassoun *Deputy Minister of Local Administration and Environment* GEF Operational Focal Point	Date*: March 24, 2008*

B. GEF AGENCY (IES) CERTIFICATION

This request has been prepared in accordance with GEF policies and procedures and meets the GEF criteria for project identification and preparation.	
 GEF Agency Coordinator	Benoit Lebot Project Contact Person
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