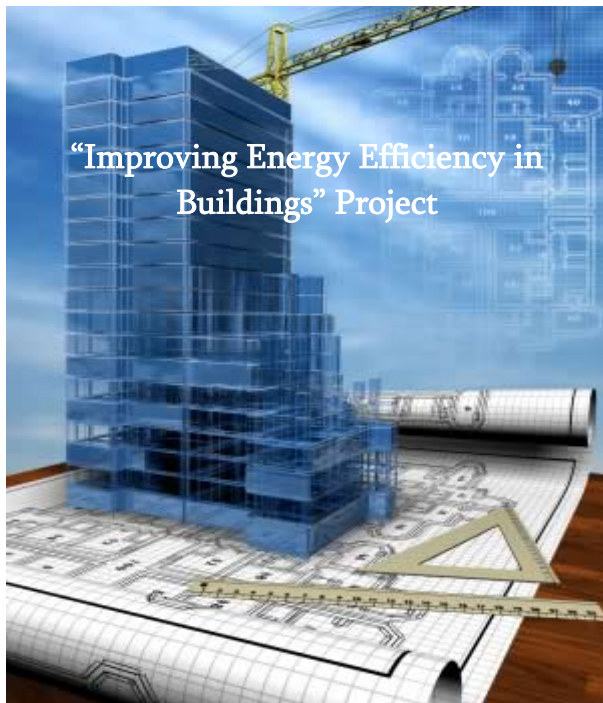




Ministry of Nature Protection of RA
Ministry of Urban Development of RA



“Improving Energy Efficiency in Buildings” Project



*“Improving Energy Efficiency in Buildings”
UNDP-GEF/00059937 project*

Project Duration: 2010 to 2015

Executing Agency: United Nations Development Programme

Implementing partners:

- Ministry of Nature Protection of RA
- Ministry of Urban Development of RA

Main partners of the project:

- Ministry of Energy and Natural Resources of RA
- The World Bank
- USAID / Alliance to Save Energy
- Energy Saving Initiative in the Building Sector (ESIB) project of European Union
- Armenia Renewable Resources and Energy Efficiency Fund
- Builders' Union of Armenia
- Yerevan State University of Architecture and Construction
- National Institute of Standards

As the Project was developed and endorsed during 2009-2010, amendments to the list of its Partners are possible.



Project Budget

Financing:

USD

Global Environment Facility (GEF)	1,045,000
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Co-financing:

Government of RA	2,000,000
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Government of RA (in-kind)	200,000
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United Nations Development Programme (UNDP) Armenia	150,000
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Project Rationale

Due to Armenia’s markedly continental climate with long heating season and winter average temperatures around -5°C , energy consumption and GHG emissions in Armenian building sector are mainly associated with space heating.

65% of Armenia's population of 3.23 million inhabitants lives in urban areas. There are over 400,000 apartments with a total area of 25 million m^2 in multi-apartment buildings. The largest portion of the urban housing stock is between 30 and 60 years old with typically poor thermal characteristics, this project is directed towards enhancing energy efficiency in residential buildings.

Making use of energy efficient technologies and practices in new and existing buildings could save as much as 34% of the projected primary energy consumption by the world’s buildings by 2020.

The Project aims at improving energy efficiency in residential buildings.





Project Objective and Tasks

The objective of the GEF full size project is to reverse the existing trends and reduce consumption of electrical and thermal energy and associated GHG emissions in new and restored, primarily residential buildings in Armenia.

It will do this by creating enabling regulatory environment, skills and capacity among industry professionals to introduce the principles of integrated building design in Armenian construction practices from the stage of building design through construction to maintenance of the buildings.

The support to be provided by the project will combine development of a new regulation (EE building codes and certification scheme) with the training of professionals, demonstration of integrated building design and stimulating manufacturing of new EE materials and equipment.

The project will be implemented under the UNDP-led GEF Global Framework for Promoting Low Carbon Buildings with a primarily focus on two thematic approaches promoted by the Global Framework:

- a) promotion and increased uptake of high quality building codes and standards; and



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- b) developing and promoting energy efficient building technologies, building materials and construction practices.

The coordination offered by the global program will help Armenia to learn from experiences and best practices from countries with similar EE building projects.





Expected Results

The project aims to decrease the average thermal energy consumption for space heating in new residential buildings in Armenia from 160 kWh/m² year in “business-as-usual” scenario to 96 kWh/m² year.

Thus cumulative CO₂ emission reductions from new residential buildings to be built during project lifetime (2010-2015) will reach approximately 60 ktCO₂eq against the baseline compared to the BAU scenario.

Project Beneficiaries

Local residents using and local companies applying modern energy efficient approaches in buildings, Armenian design and construction companies, the GoA bodies.





Project Components

Component 1

Design and enforcement of new mandatory energy efficient building codes and standards

Envisaged Activities

- 1.1. Design and introduction of new mandatory energy efficient building codes
- 1.2. Revision and development of standards and calculation methodology to assess energy performance in buildings
- 1.3. Recommendation on institutional structures, staffing, capacities and accountability for agencies in charge of code enforcement





Component 2

Quality control, testing and certification of energy efficient materials and equipments

Envisaged Activities

- 2.1. Development and piloting of standards for internal quality assessment and quality control (QA/QC)
- 2.2. Support to putting into operation a testing laboratory for energy efficient products and their certification





Component 3

Outreach, training and education on integrated building design

Envisaged Activities

- 3.1.** Introduction of modules on energy efficient buildings to universities
- 3.2.** Organization of training courses for architects and engineers on new codes and calculation methodologies
- 3.3.** Implementation of an outreach and awareness-raising campaign targeting investors and tenants



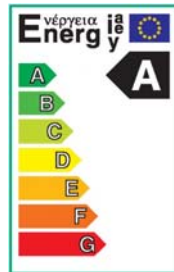
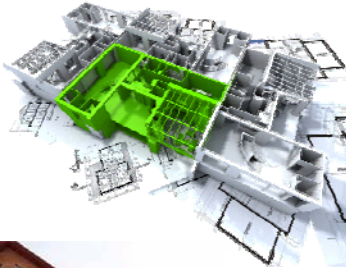


Component 4

Piloting integrated building design approach (IBDA)

Envisaged Activities

- 4.1. Using an integrated building design approach, design and construct at least one building
- 4.2. Monitor and report energy saving and GHG reduction indicators in the pilot building





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