



# UNDP / GEF Project 00074315 Building Energy Efficiency in the North West of Russia



# Project 00074315



The global objective of the project - local capacity building and demonstration implemented at the local level solutions to improve energy efficiency in the construction and operational maintenance of the buildings.

Regions of implementation:

Northwestern Federal District, Pskov, Vologda and Arkhangelsk region of Russia.

Project duration: 2011 – 2015 гг.

## **Project goals.**

1. Creating of policy and regulatory frameworks at the regional and local level to ensure compliance with the rules of energy efficiency of buildings.
2. Empowering the field for investment and investment management activities to improve energy efficiency.
3. Demonstration of reducing greenhouse gas emissions: reducing energy consumption in the construction and maintenance of buildings in the 45-76%, reduction in losses in power by 10-20%.

## **Project objective.**

1. An enabling environment and enforcement capacities for improved energy efficiency at the provincial and local levels.
2. Capacity building and know-how.
3. Demonstration of local energy-efficient solutions and management models.

# Project management

*Project National  
Director*

*Project  
Steering Committee*

*Deputy National  
Director*

*Implementing  
organization*

Project manager  
Project assistant

International  
consultants

Project coordinator  
in Pskov region

Project coordinator  
in Arkhangelsk reg.

Project coordinator  
in Vologda region

*Work Group  
Local consultants*

*Work Group  
Local consultants*

*Work Group  
Local consultants*

# Outcome 1. Enabling environment and strengthened enforcement capacities.

Regions of application:



Pskov region



Vologda region

Main goals:

- Development of a regional regulatory framework in the field of energy efficiency.
- EE creation of municipalities.
- Effective model of energy efficiency in the management of municipalities.

# Outcome 2. Capacity building and know-how.

Regions of application:



Vologda region

Main goals:

- Formation of the training modules in the field of energy efficiency.
- Development potential of universities in the North-West of EE.
- Research and the creation of know-how in the field of energy efficiency.

# Outcome 3. Demonstration of local EE solutions and management models.

Regions of application:



Arkhangelsk region

Main goals:

- The implementation of the demo projects EE buildings.
- The introduction of systems for monitoring energy efficiency.
- Development of methodology and implementation of energy efficiency certification of buildings.

## **Key project results**

- Improving the environmental sustainability of development processes and increase energy efficiency.
- Direct reduction of CO2 emissions by 48,050 tons
- Indirect reduction of CO2 emissions by 599,000 tons
- Pilot projects of energy efficiency of buildings with reduced heat consumption to 76%.
- Regional regulations on energy efficiency.
- Educational materials for schools, targeted support for universities.

## **Project financing**

Grant funds (18%)

Co-financing of cash and non-cash (82%):

- Regional Administration and Local governments.
- Educational institutions of the pilot areas.
- Supplying organization.
- Building and operating companies in the region.



# Key project summary on August 2013

## Outcome 1. Enabling environment and strengthened enforcement capacities

1. Regional methodical instructions have been developed for implementation of a new model of monitoring of building energy efficiency at the regional level;
2. Energy survey has been carried out in Pskov Oblast in 108 apartment buildings and public houses of the Ostrov and Nevel Districts;
3. Correction of regional and municipals energy saving and energy efficiency enhancement programs
4. Creating a municipal information system providing quick data collection and coordination of energy consumption at the objects of municipal entity
5. Developed standard model schemes of heating and water supply and water disposal for the Ostrov and Nevel municipal units of Pskov Oblast and currently, under approbation;
6. Legal framing in the sphere of energy efficiency and energy saving was carried out. Its outcomes were made known to the Project partners and a broad circle of interested parties.

# Key project summary on August 2013

## Outcome 2. Capacity building and know-how.

1. Developed 7 educational modules for elementary and high schools and professional and higher educational institutions, currently are in the process of methodical contenting and pilot approbating.
2. Training seminars and round tables (2 in St. Petersburg and 1 in Vologda) dedicated to the issues of personnel training in the energy efficiency sphere have been carried out.
3. A Center of Energy Efficient Design and Distance Learning was established on the basis of the Vologda State Technological University. Preparation for opening branch offices of the Center at the basis of a branch of the State Academy of Service and Economy in Pskov Oblast and the North Arctic Federal University is taking place.
4. Approbation of the developed educational materials is taking place at the sites of partner educational institutions, among which there are: St. Petersburg Technological University of Plant Polymers; the Riga Technical University; Northern (Arctic) Federal University; the State Academy of Service and Economy, and the Vologda State Technological University.

# Key project summary on August 2013

## Outcome 3. Demonstration of local EE solutions and management models

1. An framing agreement was signed with Vologda Oblastal Administration on implementation of a pilot construction project for three apartment buildings with total footage of 21,500 sq.m and meeting the standards of perspective requirements on energy efficiency;
2. P-stage project documentation has been developed for the Vologda construction site;
3. In Arkhangelsk, energy audits were carried for the 16 apartment buildings;
4. An electronic data base on the built up territories and construction projects in the City of Arkhangelsk has been developed and composed;
5. An “expenditure-income” model for the assessment of economic and investment benefits from capital investments in the energy efficient sites of capital construction;
6. Developed a model of energy certification of residential buildings and public houses for the City of Arkhangelsk; and model of interaction between energy resource market participants and consumers, to enhance transparency of accounting on energy resource utilization.

## **Lessons learned.**

- The existing normative base on the formation of tariffs for energy uses cost-based mechanisms, encourage energy saving.
- Many modern technical solutions for improving energy efficiency are not regulated.
- At construction of buildings and their exploitation, are still used, for various reasons, outdated technical solutions.
- Low level of training of specialists and population on energy saving.

## **Priority actions.**

- Development of projects of normative-legal acts on energy efficiency, standardization according to the construction norms and rules.
- Activation of the legislative initiative on the issues at all legislative levels.
- Implement effective incentive measures for energy conservation at the regional level.
- Implement mandatory energy efficiency measures during capital repairs of residential buildings.
- Strengthening the scientific and educational potential.
- Creating modules continuous professional training on energy efficiency.
- Development of training programs on energy efficiency.