

INSULATE HOUSE BY THE STATE

Date: 28.07.2021 y.



The article was written within the project **PROMHOUSE - Professionalization of housing management in Kazakhstan and Uzbekistan**

(EU Program: Central Asia Invest V, Boosting Small Businesses Competitiveness)



The project is funded by the EU. The opinions expressed in this publication are those of its authors and do not necessarily reflect the views of the European Commission



Project Information - <https://www.uyushma.uz/project>



The project is implemented by the Housing in Eastern Europe Initiative (IWO e.V.), Germany - www.iwoev.org

How to improve the energy efficiency of an apartment building with affordable and inexpensive measures? The answer to this question can be the experience of uniting co-owners of an apartment building (OSMD) "Ninth Shaft" (Kiev), presented at the webinar "Energy efficient modernization of residential buildings. "The online seminar was held within the framework of the PROMHOUSE project" Professionalization of Housing Management in Kazakhstan and Uzbekistan ", which is being implemented by the Housing in Eastern Europe Initiative (IVO, Germany) with financial support from the European Union. The project is coordinated by the European Education Center for Housing and Real Estate (EBZ). The presentation of the project of partial energy saving measures in the house under the management of the Ninth Shaft condominium was held by Alexander Trufanov, director of the energy service company Garant (Ukraine, Kiev).

Where to begin?

The main driving force and motivated entity in the thermal modernization of buildings is the management body and the residents of the apartment building. It is necessary to start with conducting a comprehensive energy audit of the building of engineering systems and analyzing the results. The decision on thermal modernization is made by a majority vote at the general meeting of the residents of the building. After that, an estimate and a project of thermal modernization are drawn up, a tender is held for the performance of work and the identification of performers. Further - carrying out the work itself on insulation and replacement of heating equipment, structures, technical supervision of the work performed, verification.

Typically, thermal modernization is required for old buildings - 60-90s of the last century. But in 2017, the management of the Ninth Shaft condominiums approached the Garant company with the problems of a relatively young house, which was commissioned in 2000. What to do? It is winter outside, residents in apartments are freezing, heating payments are growing. In neighboring high-rise buildings, the situation was much better at this time in Kiev announced the state program of "warm loans" aimed at the development of energy efficiency in houses. Taking such a loan, residents could take measures for partial energy saving. 70% of the funds spent on the implementation of energy-saving measures were

reimbursed to the program participants at the expense of the state. 30% were supposed to be funds of residents. There was hope for a solution to the problems at home with the help of a government program.

Diagnose the house

To understand the problems at home, it was necessary to diagnose him, to conduct an energy audit. This is an important stage on which all others and the result of thermal modernization in general depend. For the official examination, admission to the apartments, it was required to conclude an agreement with the management body, and for this it was necessary to obtain the consent of the tenants. The board of condominiums began explanatory work, and a month later the experts of the company "Garant" were invited to the general meeting. The inhabitants were divided into three camps. Some said that nothing would work out, others - why do we need it, and still others advocated that something should be done. All together were interested in one question: what will they get from measures to improve energy efficiency at home. A reasonable approach took over: something must be done.

The specialists began the examination. The house was built in 2000, it has 198 apartments and consists of seven sections. The first has 10 floors, from the second to the seventh - 14 floors. At first glance, everything looked good. Heating problems arose mainly among the residents of the end sections. Some had the air temperature + 23-24. opened the vents, for others - d about +16. The board of condominiums took measures to insulate the house, but they did not bring results. In fact, it was not that simple. Reducing heat loss in a house depends on many factors that residents are unaware of: correct calculations, quality of materials, insulation scheme, compliance with technology, etc.

In the basement of the house, heat supply pipes were insulated, partly - technical floors, the heating point was insulated, etc. Heat loss was clearly demonstrated by thermal imaging inspection of engineering systems and enclosing structures. It made it possible to identify the "cold bridges" through which the main heat leak occurred. This was important, including for the understanding of the problem by the residents.

Residents "heated" the left bank of the Dnieper

It turned out that during the construction of the house, wall structures with insulation, new at that time, were used in the end sections. There was not enough insulation in them, there were "cold bridges" at the joints between them. As a result, heat was thrown out of the house onto the street and was lost in technical rooms. The basement was warmer than some of the end apartments. Experts joked that residents "heat" the left bank of the Dnieper.

Significant heat losses occurred through the loggias In 44 apartments on the loggia, heating devices were taken out, which is prohibited by law. In winter, through the open windows, heat was thrown out into the street. When removing the radiators, the loggias were not insulated, as a result, the street was actually heated. In many apartments, additional sections have been added to the heating devices. 40 inserts were made into the heat supply system, which became a violation of the hydraulic balance. It turned out that all the rest paid for the initiative of some of the residents.

When the Garant specialists voiced the problems at home, indicating how much heat and money was thrown into the wind, the residents gasped: "It can't be!". They agreed with the recommendations of specialists to reduce losses - they were impressed by the economic effect of the proposed measures. But, having estimated the costs of complex energy modernization, we came to the conclusion that they would not be able to pull it off. Then they asked the specialists to prepare a project for the partial thermal modernization of the house, hoping to enter the state energy efficiency program with 30% of the savings.

Activities for the partial thermal modernization of the residential building included:

- thermal insulation of the front end walls;
- thermal insulation of pipelines of the heating system in the basement (basement area - 3,463.44 sq. M.);
- installation of automatic balancing valves on the heat supply pipelines.

These measures allowed residents to provide a partially comfortable standard of living, uniform heating of apartments in all sections of the building, and streamline payments for heat, which used to heat the street.

The project was financed in 70/30 proportions, where 70% of the costs were covered by the state program Energodom. 30% - at the expense of residents. The funds invested by them paid off pretty quickly.

The work of the Ninth Shaft OSMD with the Garant company continues. Experts guide the association of home owners towards an integrated approach to solving problems



The following energy saving measures are planned:

- thermal insulation of the technical floor;
- insulation of all walls of the facade of two sections of the house;
- installation of a control unit in an individual heating point (weather regulation);
- installation of a separate heat meter for the heating system;
- Consideration of the issue of installing individual heat meters for apartments.

Of course, thermal modernization of a residential building is a rather specific issue that specialized organizations are engaged in, but the role of the manager in this process is high. It is viewed through the prism of the goals and objectives of the management company - to ensure effective maintenance of common property. Over time, it wears out and requires modernization. The manager must correctly assess its technical condition. He has the ability to manage the process of comfort in the house by properly organizing work with tenants who approve and pay for thermal modernization measures.

Author: Irina Grebenyuk, special correspondent of the newspaper "Norma"

The article was published in the newspaper "Norma", heading: The house in which we live, No. 30 of 27 July 2021 y.

