

Translation for <http://www.tecom.com.ua/cmfi.php?action=one&num=64>

According to the U.S. Agency for Environmental Protection for more than 17% of all U.S. energy use in homes. This is quite a large part of the total energy consumption of the country. Therefore, in the U.S. a lot of attention is paid to the optimization of energy consumption houses. This is, in particular, aims standard Energy Star, the introduction of which the U.S. gives real results. The first step in the optimization of energy consumption of residential buildings is to conduct energy audits of residential houses.

During the internship, "Energy efficiency in buildings" program SABIT for our Group had a meeting with the U.S. companies that specialize in energy audits in homes. The first meeting was held on January 17, 2013 in Manassas, Virginia by The Home Energy Detective.



With the company «TDS Sustom Construction» we met at the beginning of February 2013 in Madison, the state Viscontini.



Before we talk about the methodology of the energy audit to the U.S., I would like to say a few words about the homes in which they live, and American families in which to conduct an energy audit. Most Americans live in individual houses. Americans are building houses out of wood panels. Brick or concrete houses in America, virtually none. (It is believed that a tornado destroyed the stone house, leaves no chance of survival to its inhabitants, and the wreckage of the wooden house is much easier to get



Americans love the convenience and comfort. Each house is equipped with air conditioning. Heating systems in buildings mostly air. Americans need the comfort largely determines the nature of the action to ensure economical use of energy. Create optimal conditions in the premises - is a priority. Ideology at any cost savings ("Energy"), adopted here, is an obstacle to the development of processes for Energy Efficiency ("disruption is not in the closet, and in the minds of" Mikhail Bulgakov).

The concept of operations of the two companies are very similar. Methodology for energy audits are very close. The list of instruments to be used in conducting an energy audit is practically identical. The purpose of the audit is to:

- Eliminate drafts and cold floors to ensure comfort;
- to achieve efficient operation of heating systems and cooling systems;
- Check safety of gas equipment and increase the efficiency of its operation;
- preventing the causes of the high humidity and mold in buildings;
- check the efficiency of operation and testing of vent systems;
- Development of measures to sealing and insulation of the building envelope.



If desired, the owner of the house, auditors can perform virtually all the work on energy efficiency:

- sealing of home designs;
- thermal insulation of building envelopes;
- waterproofing and vapor barrier structures;
- Seal air ventilation and conditioning of the;
- adjustment of heating and ventilation systems;
- other work.

Energy auditors provide homeowners with information about the availability of government incentives to implement the above-mentioned works. Government incentives - subsidies - are one of the main factors creating motivation for the implementation of energy modernization of residential buildings.

The average cost of a residential building energy audit is \$400-500. The costs of the thermo-house in accordance with the findings of an energy audit - up to 5-6 thousand dollars. Costs incurred, subject to the provision of state compensation, pay off quickly. Such a complex of works spread throughout the United States.

In the Ukraine the cost of work will be much lower. However, our government does not offer grants and seems this still does not reflect.

In conducting energy audits of residential homes in the U.S. and other Western countries focus on limiting uncontrolled air exchange between indoor heated air and cold outside air. It is about achieving a nearly complete seal a home that will reduce the cost of energy. This approach significantly increases the responsibility for providing high-quality operation of ventilation systems at home. The situation is aggravated by the fact that the houses are usually maintained gas appliances.

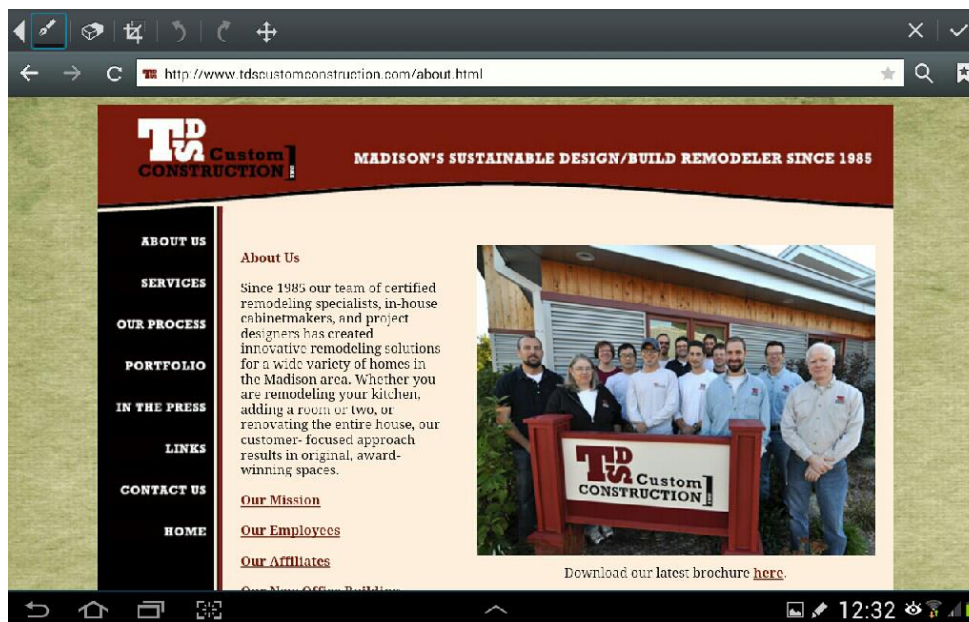
To test the tightness of homes in the U.S. is widespread special device that has a name BLOWER DOOR SYSTEM, which is a fan, mounted on a special door convertible. The device package includes a computer.

When testing the fan removed from the room a certain amount of air, enough to create a vacuum in the house of 50 pascals. With all doors, windows and vents closed. This test method determines the amount of outside air sucked through leaks and estimate the total area of the slots that are available in the house. When tested in the cold season, when the outdoor temperature is significantly lower than indoor air temperature, using thermal [tnostitelno] may easily identify the location of the gaps and eliminate them.



During the test the door transformers installed in the opening doors.

Would like to sincerely thank Mr. Troy Tanner, president of the company «The Home Energy Detective» and Mr. Sam Breidenbach, president of the company «TDS Custom Construction» for the opportunity to learn from the experiences of the companies, for their hospitality and friendliness.



Lessons learned will be useful for our company. Look forward to continuing contacts with U.S. companies. Features of our country can count on quite a large market in this area at present. But, of course, we will make efforts to carry out such work, despite the fact that the performance of such work requires a lot of expensive equipment. The future for these works.

Interested owners of individual houses, please contact us. We welcome cooperation.

