

## **New in energy saving technologies.**

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Existing 2 main ways of energy saving (increase of production) and improvement of methods of consumption stay 2-caste part I considered earlier in [1-3]. Ways to improve energy use very much. In particular, this construction, including construction of economic buildings in the power relation and their operation, electric transport and processing of waste. To complete the picture, analyze the state of affairs in the above areas in different countries. Houses and administrative buildings are considerable consumers of thermal and electric energy. Climatic conditions make a significant contribution to the total consumption.

By estimates [4] 64% of thermal energy developed in the country are spent for heating and a hot water service in Russia. It is approximately three times higher, than in the European countries with similar climate. The considerable share of the Russian buildings is characterized by the lowest level of a heat-shielding. In close Canada on climatic conditions this indicator makes 3 times less. Energy saving potential only in the sphere of construction and housing and communal services makes 30-40% of all power consumption of the country. Two thirds of energy consumption in Russia go for heating, and 70% from them – for nothing. The correct isolation of facades, sealing window and doorways cuts heat loss by half. In recent years there were new technologies of energy saving - the passive houses in fact warmed at the expense of heat, allocated by people and electric devices. Such dwellings by 10 times surpass standard "five-storey apartment blocks" in profitability.

New technologies include [5] the use of concentrators, film heaters, working on the principle of electric heating, plugged in ceiling and floor, heat pumps, solid fuel boilers, solar collectors. The heat pump is practically free source,

extracting up to 80% of energy from the environment. Widespread and "smart house" is an extremely popular today, automated control systems, implemented both in the homes and offices. They use motion sensors that monitor human presence, depending on what happens on/off the power supply of the room.

Waste in recent years come to the fore in the civilized world [6].

Depending on the economic expediency of application of different treatment technologies in the developed countries the state applies a stimulating the market actions of the tax administration or tough legal restrictions. Processing of solid domestic waste (SDW) and other waste depends largely on the degree of development of the system; it's sort of the respective programs. Solve not only environmental issues, health of citizens, but also the opportunity of processing of waste energy sources.

Ground transportation is a huge energy consumer, and the savings can make a significant contribution to energy efficiency in General.

According to the Federal Ministry for the protection of the environment of Germany [7] the noise of traffic is harmful to 50% of the population. Electric vehicles can significantly lower the level of city noise. Even at high speeds noise of the electric car is about 50% lower than that of a car with an internal combustion engine. The disadvantage of electric vehicles is lower mileage per charge. Electric vehicles compact class are without recharging maximum 200 km Special charging method allows you to recharge the battery for half an hour to 80%. An example of the electric car representative-class Tesla Model S shows that today possible and periodically mileage per charge. Data on new technologies in the field of energy saving are provided in EU, the USA, Japan [4, 5].

#### List of references

1. Левинзон С.В. Новые тенденции в энергосберегающих технологиях//Международный журнал экспериментального образования.- 2011.-№6.-С.78-79.
2. Левинзон С.В. Энергосберегающие технологии: плюсы и минусы//

Международный журнал экспериментального образования.- 2012.- №4.- С. 75-77.

3.Левинзон С.В. Энергосберегающие технологии. Взгляд в будущее// Успехи современного естествознания.- 2013.- №5.- С. 126-129.

4.Спиридонов А.В..Шубин И.Л. Энергосбережение в США, Европе и России. URL <http://stroy-profi.info/files/pdf/3/stroyprofi-3-38.pdf> (25.06.2014).

5.Энергосберегающие технологии в России и за рубежом.URL <http://stroimos.ru/energoberegayushchie-tehnologii-v-rossii-i-za-rubezhom>(11.06.2014).

6.Пассивные дома. Новые технологии энергосбережения. URL [http://kottedg60.ru/passivnye\\_doma\\_chno\\_eto\\_takoe..z](http://kottedg60.ru/passivnye_doma_chno_eto_takoe..z) ( 05.07.2014)

7.Шалмиев И. Электромобили хороши для климата и лёгких// Европа - экспресс.- 2014.- №27(851).- С.24.