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### **HOW AND WHY IT IS NECESSARY TO INCREASE ENERGY EFFICIENCY**

Energy saving is the practice of reducing the amount of energy consumed. This can be achieved through the efficient use of energy. In this case, energy consumption is reduced, while at the same time getting the same result, or by reducing the consumption of energy services. This is one of the easiest ways to help the world through pollution in addition to using natural energy.

This can lead to increased financial capital, better environmental outcomes, national security, personal safety and human comfort. Individuals and companies are direct energy consumers who may need to save energy in order to reduce energy costs and ensure economic security. Industrial companies may want to increase efficiency and, as a result, maximize their advantages.

Energy conservation is the reduction or elimination of unnecessary or undesirable energy use.

Energy conservation plays an important role in reducing climate change. This helps to replace non-renewable resources with renewable energy. Energy conservation is often the most inexpensive solution to energy shortages and is a more environmentally friendly alternative to increasing energy production.

Since we have a limited number of non-renewable energy sources available on Earth, it is very important to conserve energy from our current reserves or use renewable resources so that they are also available to our future generations.

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Energy conservation plays a very important role because the use of non-renewable resources also affects our environment. In particular, when burning oil, coal and gas in power plants, heating systems and car engines, a substance such as carbon dioxide is formed, polluting air and water.

As we all know, carbon dioxide works as a transparent layer in the atmosphere, which is one of the causes of global warming of the Earth, or we can also call it the greenhouse effect. Global warming has consequences for our atmosphere. It has its deadly consequences, such as the spread of various diseases, an increase in water temperature and an increase in the probability of hurricanes, financial costs, melting of polar ice, an increase in the probability and intensity of heat waves. Ozone depletion is the reduction of the protective layer of ozone in the upper atmosphere as a result of chemical pollution. The ozone layer is a protective line between the earth and the ultraviolet rays emitted by the sun. People who are exposed to more UV radiation may have some health problems, such as DNA damage, skin cancer, aging, and other skin-related problems.

Some possible problems may arise, which include risks to human health, environmental impacts, such as sea level rise, and major changes in vegetation cultivation methods. When coal is burned, it releases sulfur dioxide into the air and therefore reacts with water and oxygen in the clouds and forms acid rain. Acid rain kills fish and trees, and damages limestone buildings and statues. Such global problems can be solved. According to US data calculated over a year, people found that the average household energy consumption produces more than 11,200 pounds of air pollutants. Thus, each kilowatt of electricity saved reduces the environmental impact of using energy.

The energy-saving method of switching to LED lamps has been applied for a long time. This measure even prohibits the use of incandescent lamps in order to save a huge amount of electricity that is spent on lighting. This method

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is an example of a global and well-known way of saving. This article suggests the application of the method of energy saving and rationalization of energy consumption on a more in-depth plan.

Many production processes entail the loss of thermal energy, which simply interacts with the environment. The largest example is cement production, and a smaller one is bread baking. Both industries differ in the scale of heat release into the atmosphere, and therefore different methods of heat conversion into electricity are proposed. Some large plants already have mini hydroelectric power plants. But the semiconductor conversion of thermal energy into electrical energy is less developed. Taking into account the existing experience in this industry, it is worth paying attention to circuit-based semiconductor devices and their improvement, since they can be used in production and thereby increase the energy efficiency of the cycle as a whole.

Most likely, at a confidential level, similar semiconductor thermoelectric generators already exist, but disclosure of this information is not permissible. The time will come when these devices will be used in large quantities, and then we can safely say that electricity consumption in the production areas will be reduced by about 20%.

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