

UDC 629.92

Bratkovska Kateryna¹, Tomachenko Daria²

¹ PhD (Econ.), assistant professor NU "Zaporizhzhia Polytechnic"

² student of group E-511 NU "Zaporizhzhia Polytechnic"

ENERGY SAVING AS A WAY OF ACHIEVING ENERGY INDEPENDENCE

The growth of economic indicators of the world economy leads to a gradual increase in the consumption of energy resources. Energy consumption by 2035 will increase by almost a third - from 13.1 billion tons of oil equivalent in 2015 to 17.3 billion tons in 2035. At the same time, in Ukraine, total energy consumption will increase by 7% - from 90 to 96 million tons of oil equivalent, experts predict.

The current electricity tariff for the population of 4.32 UAH/kWh does not cover its full cost, so the difference is compensated by state-owned enterprises such as Energoatom and Ukrhydroenergo.

Energy conservation is an activity aimed at the rational use and economic consumption of primary and conversion energy and natural energy resources in the national economy, carried out using technical, economic and legal methods.

In Ukraine, the first law on "energy conservation" appeared in 1994 after gaining independence. Rising electricity prices at the tap force users of certain services to look for alternatives to what they are used to. This leads to a greater demand for energy-saving solutions, such as LED lighting, building insulation, "Smart House" technologies, solar panels, and so on. The tariff and price of electricity are an incentive to save energy. Users are starting to save, but are looking for smart ways. Society is looking for other equipment or materials to save their own money profitably. When the price of thermal energy in the country increases, people start to insulate the premises in order to consume less thermal energy and pay less.

The economic prerequisites for building new coal and gas-fired capacities are disappearing, as high-capacity batteries take over the main function of these capacities - to generate the maximum amount of electricity during peak load.

Energy efficiency is the prudent, careful use of our planet's energy resources. An increasing number of users are also choosing energy-saving household appliances for their homes. The gradation of consumer properties of the product consists of 10 stages and shows both the most economical options (from A to A+++) and the most expensive (G). Optimized electricity consumption and

information about the energy consumption class are one of the most important ways to avoid waste. . It is the low tariff in Ukraine from 23:00 to 7:00 at night that allows users to increase demand for consumption during these hours through low prices. More and more households, small and medium-sized businesses are getting out of this situation by installing solar panels, wind turbines, they provide renewable energy to power electrical appliances and heat buildings. Battery energy storage systems help accumulate electricity, making consumers less dependent on the central energy grid. Also, consumers of private homes and small businesses began purchasing generators at the beginning of 2022 to meet their own needs and function during blackouts.