

RENEWABLES

Mariya Pupach

Faculty of Chemical Technology,

National Technical University of Ukraine “Igor Sikorsky Kyiv Polytechnic Institute”

Energy is an integral part of human life used by every person. Usage of household appliances, transport, light, and water are examples of energy consumption. People usually do not even think how this energy is produced. Its production is a global issue. The burning of solid and liquid fossil fuels is accompanied by the release of sulfur, carbon dioxide and carbon monoxide gases, as well as nitrogen oxides, dust, soot and other pollutants (Zhovtyanskyi, 2012). This has serious consequences for the climate and human health.

Renewable energy sources are also called green energy. These are energy sources that are regenerated faster than they are consumed. They are increasingly gaining popularity. Renewable energy sources include: solar energy, wind, hydropower, and natural thermal energy.

In Ukraine, the most profitable renewable energy is solar power plants and wind power plants (MCL, 2020). Biomass power plants, hydroelectric power plants, and biogas power plants are also popular. The share of renewable energy in the total

capacity of power plants in Ukraine for 2021 is 7.3 % (Analitichnyi portal «Slovo i diia», 2021).

Russia's war against Ukraine strongly affected the production of green energy at renewable energy facilities in Ukraine. Under the influence of enemy fire, the equipment cannot work at full power. The destruction of energy equipment as a result of shelling by the Russian army was recorded (Demchenkov, 2022).

Due to the aggressors hitting the thermal power plants of Ukraine, many Ukrainians are currently limited to light or have no light at all. I live in Kyiv and currently the situation here is very difficult, the energy restriction is very strong, in order to stabilize it. Lighting candles is quite dangerous, because they emit carbon monoxide. To a small extent, it does not cause much harm to health, but if you often use low-quality candles, this is a rather dangerous option. My dad and I solved the problem of lighting with the help of green energy. We used solar panels placed on the balcony. We placed small lamps in all the rooms, including the bathroom, toilet and kitchen. The installation is primitive, but there is lighting, which is already wonderful.

Therefore, we can conclude that renewable energy is still a promising direction today. Considering the future fate of humanity, the development of renewable energy is very important to avoid the dependence on temporarily available resources. It also creates the possibility of economic growth and the creation of new jobs. For Ukraine and for all countries of the world, this is quite an important issue, because it contributes to the energy independence of the country.

References:

Zhovtianskyi, V.A. (2012). Rozdil 2. Vplyv teploenerhetyky na navkolnyshnie seredovyshe. [The influence of thermoenergy on the environment]. Retrived from: <http://energetika.in.ua/ua/books/book-5/part-3/section-2>

Slovo i diia analitichnyi portal (2021). Vidnovliuvana enerhiia v Ukraini: yak zminylysia potuzhnosti. [Renewable energy in Ukraine: how capacities have changed]. Retrived from: <https://cutt.ly/ZNzfb7n>

MCL (2020). Vidnovliuvalna enerhetyka v Ukraini. [Renewable energy of

Ukraine]. Retrived from: <https://mcl.kiev.ua/vozobnovlyaemaya-energetika-ukrainy/>
Demchenkov, I. (2022). Yak viina v Ukraini pryshvydshuie perekhid YeS na vidnovliuvani dzherela enerhii. [How the war in Ukraine is speeding up the EU's transition to renewable energy sources]. Retrieved from: <https://www.epravda.com.ua/columns/2022/05/12/686934/>