

## **GLOBAL WARMING**

***Oleksandra Sumovska***

*Faculty of Chemical Technology,*

*National Technical University of Ukraine "Igor Sikorsky Kyiv Polytechnic Institute"*

In 2022, greenhouse gas emissions in the European Union's economy amounted to 1.029 billion tonnes of CO<sub>2</sub>-equivalent (CO<sub>2</sub>-eq), which is 7% and 6% higher compared to 2020 and 2021, respectively, while the EU's economy emitted 1.035 billion tonnes of CO<sub>2</sub>, still below the levels recorded before COVID-19 in 2019," he said.

Meanwhile, in terms of CO<sub>2</sub> emissions, Ukraine ranks 35th among countries worldwide, with 189.3 million tonnes per capita in our country, according to the World Population Review. Ukraine is not a leader in terms of greenhouse gas emissions, but it is actively approaching the top 50 countries with the most polluted air.

According to Our World in Data, the construction sector is one of the sectors with the highest CO<sub>2</sub> emissions.

Now, let's remember that CO<sub>2</sub> is the main sponsor of a massive global problem for our planet and humanity - global warming. Such damage to nature will not go unnoticed, as excess CO<sub>2</sub> in the atmosphere leads to a rise in temperature, accelerating global warming. This creates what is known as the "greenhouse effect"

and disrupts the global carbon cycle, absorbing excess heat. In addition, excessive greenhouse gas emissions contribute to the acidification of water bodies, lowering the pH level.

The international community is taking a global approach to addressing environmental issues. Innovative solutions to the problem of excessive CO<sub>2</sub> emissions were presented at the World Changing Ideas Awards ceremony, one of the main annual programs of Fast Company focused on societal well-being and aimed at improving the quality of finalized products and daring ideas that make the world a better place.

One of the global leaders in digital transformation in energy management and automation, the German company Schneider Electric, was recognized in the "Construction" category of the prestigious Fast Company World Changing Ideas Awards 2022. The reward was given for IntenCity, a new zero-carbon unique building of the future located in Grenoble, France. Since buildings account for about 40% of global CO<sub>2</sub> emissions and over 30% of energy consumption, the industry must massively adopt digital technologies to achieve better and more efficient results by forecasting and minimizing waste. Energy consumption in IntenCity is 10 times lower than that of an average European building. The building does not burn anything, and all energy comes from renewable sources.

The ultimate goal is to combine progress and sustainable development so that everyone can use energy and resources as efficiently as possible. This concept is called "Life Is On."

In this way digital partners for sustainability and efficiency support technical transformation by integrating the best processes and technologies into energy management, product connectivity, cloud solutions, management tools, software, and services throughout the equipment's entire life cycle.

So, comprehensive management for buildings, structures, data centers, infrastructure, and industrial facilities is provided on the bases of open standards and partnerships with everyone who shares desire to improve the quality of life and values diversity, equal opportunities, and self-realization.

**Reference:**

Schneider Electric <https://www.se.com/ww/en/>