

## **GLOBAL WARMING**

*Y. Kuyek*

*Faculty of Heat and Power Engineering,*

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

Global climate change is one of the most acute environmental problems that humanity is facing. According to the predictions of the leading international scientific centers of climate research, during the next century the temperature will increase by 2-5 degrees Celsius. Such global warming will cause serious climate change and various ecosystems will be endangered.

Today we can say for sure that significant climate change is already taking place. We must think and understand that humanity has no right to pollute the atmosphere of the planet. If we do not start to act vigorously, we will soon come closer to the point where it will be impossible to stop the global climate change and life in the world will be threatened in the future.

Moreover, modern forecasts of the occurrence of adverse meteorological phenomenon indicate the need to identify them as a norm. There is a need for the development and implementation of adaptation to the climate change plan. Adapting to global climate change is adaptation in natural or human systems as a response to actual or expected climatic influences or their consequences, which helps to reduce harm and take advantage of opportunities.

The main reason for climate change is the use of fossil fuels and inefficient energy consumption. Greenhouse gases, which are formed as a result of human activity, increase the greenhouse effect. Excessive amounts of gases generated as a result of combined heat and power plants (CHP), transport, agriculture, industry, and forest fires keep solar heat in the lower atmosphere, preventing it from returning to space.

The most notable and important consequence of climate change is global warming. According to the Polling Report study, only 52% of Americans believe that there is a consensus between scientists that the Earth has really warmed up in recent

years; and 47% believe that scientists have agreed on the main cause of heating. The rest of the respondents are convinced that the scientific community is still arguing. However, a survey of the University of Illinois found this: only 2.6% of scientists doubt that global warming is directly caused by human activity.

The main reason for global warming is increasing the natural greenhouse effect by emissions into the atmosphere of greenhouse gases (carbon dioxide, methane, nitrogen oxide, etc). Data from satellites suggest that during the XIX century in the Northern Hemisphere the temperature of the air changed. The area of sea ice in the spring-summer season decreased by 10-15%, the area of snowcover diminished, and there appeared some features of the change of climatic zones. Amount of atmospheric precipitation at the beginning of the XXI century, as compared with the end of the XIX century, increased by 8-10% over a century in most areas of high and middle latitudes in the Northern hemisphere. At the same time, in the second half of the century the frequency of heavy precipitation has increased. Throughout the globe, the change in rainfall is not unequivocal. There is an urgent need to study and observe regional features of the humidification regime at the global level warming climate. The climate of Ukraine is sensitive enough to change the global climate.

It is depressing that whatever we do about climate change, some impacts are irreversible. Emissions in the atmosphere now are enough to ensure a 1.5 degree Celsius temperature increase compared to pre-industrial times. That has already led to such severe climate impacts as droughts, flooding, and ocean acidification.

So, the study of the current climate of Ukraine and the climate of the near future is of great importance.

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