

million came to local budgets in accordance with the mechanism set out in the legislation for the distribution of rents for oil and gas production.

The highest revenues from Ukrnafta rent were received from the budgets of Sumy (UAH 10.6 million), Ivano-Frankivsk (UAH 6.04 million) and Poltava (UAH 3.6 million) regions. Rental income depends on the volume of hydrocarbons produced in a given region and is used by communities mainly for the implementation of local infrastructure and social projects.

For the twelve months of 2019, Ukrnafta paid UAH 12.47 billion to the budgets of all tax levels. The amount of taxes paid includes more than UAH 60 million paid by the company to repay the overdue tax debt. According to the State Fiscal Service of Ukraine, Ukrnafta is among the top 10 taxpayers.

Movement and supply of gas

Ukrnafta has a balance of more than 3000 km of gas transmission networks used in the production activities of oil and gas production units and gas refineries in the process of collecting, preparing and transporting (moving) gas as its own production, as well as production of other gas companies and gas from other gas suppliers. Part of the in-house gas pipelines is used to transfer gas to the gas transmission system, gas distribution systems and direct consumers.

Plans for 2020

Ukrnafta plans to continue the development of hydrocarbon deposits at the West Koziyiv and Kachaliv fields by an existing well fund in the Kharkiv region. This is reported in the register of environmental impact assessment (ATS).

At the West Kozyivsky Oil Field (HPP) according to the planned activity, it is envisaged to develop deposits with the available wells by means of a mechanized method of operation with the use of a gas-lift compressor station based on AC compressors of type 250.

References:

1. <https://www.ukrnafta.com/>
2. <https://expro.com.ua/>

ENVIRONMENTAL PROBLEMS OF UKRAINE

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In the conditions of scientific and technological progress, the relationship of society with nature has become much more complicated. People got the

opportunity to influence the course of natural processes, conquered the forces of nature, and began to take possession of almost all available renewable and non-renewable natural resources. But at the same time they pollute and destroy the environment. According to the World Health Organization (WHO), up to 500 thousand compounds are practically used with more than 6 million known chemical compounds; of which about 40 thousand are harmful to humans, and 12 thousand are toxic.

A high concentration of technogenic objects contributes to environmental pollution, reduces the comfort of life. The main sources of urban air pollution are transport, energy systems and industry. As a result, noise, vibration and electromagnetic pollution of cities is formed. Hazardous to human health is an increased electromagnetic background from various sources of radiation – television, radio stations, radio transmitters of mobile phones.

More than 6 million tons of harmful substances enter the atmosphere of Ukraine annually. The main pollutants are industrial enterprises, which, together with smoke, emit sulfur dioxide and carbon dioxide, nitrogen oxides, chlorine, fluorine, ammonia, particles and compounds of mercury and arsenic into the air. The increase in the number of cars on the roads has also increased the amount of harmful emissions into the atmosphere.

Human intervention in natural processes increases sharply and can cause a change in the regime of groundwater in entire regions, surface runoff, soil structure, intensification of erosion processes, activation of geochemical and chemical processes in the atmosphere, hydrosphere and lithosphere, changes in microclimate. Modern activities, for example, the construction of hydraulic structures, mines, roads, wells, reservoirs, dams, land deformation by nuclear explosions, the construction of giant cities, watering and landscaping of deserts, and other everyday aspects of human activity, have already caused significant visible and hidden changes in the environment.

The main sources of natural water pollution are:

- atmospheric waters that carry significant amounts of pollutants that are washed out of the air and are primarily of industrial origin. When confluent along slopes, atmospheric and melt water additionally capture a significant amount of substances. Especially dangerous are drains from city streets and industrial sites, which carry a significant amount of oil products, phenol waste, and various acids;
- urban wastewater, including mainly domestic wastewater containing feces, detergents (surface substances), microorganisms, including pathogens;
- industrial wastewater generated in a wide variety of industries, among which ferrous metallurgy, chemical, timber chemical, and oil refining industries consume water most actively.

In historical terms, there are several stages of change in the biosphere by humanity, which culminated in environmental crises and revolutions, namely:

- the impact of humanity on the biosphere as an ordinary biological species;
- super-intensive hunting without changing ecosystems during the formation of mankind;
- changes in ecosystems as a result of processes occurring naturally: grazing, increased growth of herbs by burning, and the like;
- intensification of the impact on nature by plowing soils and deforestation;
- global changes in all environmental components of the biosphere as a whole.

The increase in the scale of extraction of mineral resources raises the problem of protecting the subsoil. The rational use of subsurface resources and reducing the loss of useful components during mining and processing should be considered. For this, it is necessary to introduce the integrated use of mineral raw materials, widely apply modern effective technologies for the extraction and processing of depleted ores, and waste management. The aggravation of these problems makes it necessary to solve the problem of the further coexistence of man and nature based on the rational use of natural resources.

References:

1. www.ru.osvita.ua/vnz/reports/ecology/21348/
2. www.eco.com.ua/content/ekologichna-problema-yak-naslidok-ekonomichnoi-diyalnosti

ELON MUSK: THE MAN OF TOMORROW

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The 46-year-old entrepreneur, engineer, inventor, investor and billionaire Elon Musk is known for his “fantastic” ideas, many of which he has already been able to realize. For many people, his name is associated only with Tesla Motors, but in fact, he is the founder or investor of a large number of other companies, each of which reflects Musk's dreams to change the human concept of life on the planet.

Many of his ideas at first glance seem unbelievable – but not so long ago, the autopilot of the Tesla electric car also looked something impossible.

In 2002, Musk founded SpaceX: according to him, this became one of the most important events in the history of mankind.

Today, SpaceX is developing and launching state-of-the-art rockets and spacecraft. With this project, Musk wanted not only to revolutionize space