

3. “Solid fuel boilers: market innovations (Article” Aqua-Term”. – № 05, 2008. – S. Ivakhnenko)”.
4. <https://teplozon.com.ua/novosti/avtonomnoe-otoplenie>.

NAFTOGAZ ENERGY EFFICIENCY MANAGEMENT

NADIA SHVETS, student

IVAN I. KAPTSOV, Professor, Doctor of Science in Engineering, Scientific Adviser

YEVHENIIA S. MOSHTAGH, Associate Professor, PhD (Philology), English Language Adviser

O. M. Beketov National University of Urban Economy in Kharkiv

Naftogaz priorities to protect the environment are maintaining high environmental standards, rational use of fuel and energy resources, energy efficiency, and the introduction of energy management systems by enterprises of the group.

The group’s energy consumption structure. Natural gas dominates (almost 86%) the fuel and energy resources (FER) consumed by the enterprises of the group. As a result of the energy efficiency program for 2015-2020 and energy conservation programs implemented by subsidiaries ,in 2016 Naftogaz saved 306.8 thousand t in reference fuel (214.8 thousand t in oil equivalent), or UAH 1.6 billion in monetary terms. Natural gas savings amounted to 240.1 mcm and electricity savings totaled 25.5 million kWh. Actual energy savings exceeded the target by 90.8 tcm in reference fuel, including natural gas by 68.9 mcm. The introduction of a 6 MW condensing power plant (CPP) into operation in Shebelynka gas condensate and oil processing enterprise (Ukrgezvydobuvannya) resulted in significant reduction in thermal energy consumption. The CPP uses waste heat of flue gas from gas fractionation units for technological needs and producing electricity in a steam turbine for its own needs.

Implementation of energy management system at the enterprises of the group. In 2016, Naftogaz began to implement an energy management system (EnMS) to streamline energy efficiency management procedures in accordance with the energy efficiency requirements of ISO 50001. During 2016, an energy audit was performed at the enterprises of the companies, energy efficiency policies and objectives were drafted, and an EnMS implementation plan for 2017-2020 developed.

Monitoring of natural gas consumption by different groups of households. In order to analyze the actual use of natural gas by households, the company has monitored the consumption of natural gas during the heating season 2015-2016 via in different social groups. In addition, to determine the maximum amount of natural gas used for different purposes by customers with

no heating sources other than natural gas, the company, together with gas distribution organizations, conducted monthly on-site inspections to check the use of gas consumption. Implementation of the company's proposals will improve the efficiency of natural gas use, reduce the need for natural gas and for subventions from the state budget for subsidies, and create the conditions for the direction of released funds to increase hydrocarbon production in Ukraine.

Implementation of innovative energy efficiency projects. In 2016, Ukrtransgas worked with the Institute of Engineering Thermophysics and the National Academy of Sciences of Ukraine to develop a basic solar power plant scheme for the simultaneous production of electricity and cooling at transmission system facilities. As of the date of this report the solar power plant pilot project has been launched. The power plant can generate almost 400 thousand KWh of electricity per year to satisfy the office and industrial site needs of Ukgaztehzvyazok branch facility. In addition, Naftogaz has developed a number of recycling projects designed to transform combustion heat at compressor stations (CS) and boosting compressor stations (BCS), the energy of overpressure at gas transportation system (GTS) facilities and the geothermal energy in the depleted oil and gas wells.

Targets for 2017-2020:

1) Promote company proposals to allow households to use the unused part of their energy subsidies for energy saving measures.

2) Continue implementation of the energy efficiency program. In 2017, as a result of implementation of the energy efficiency program, the enterprises of the company plan to save 148 thousand t in reference fuel (100.7 thousand t in oil equivalent).

3) Continue implementation of energy management systems according to the requirements of ISO 50001.

References:

1. In the black. Annual report, 2016. – Pp. 44–47.

THE ROLE OF CARGO TRANSPORTATION IN THE MODERN WORLD

TETIANA STEPANOVA, student

GANNA O. SAMCHUK, Senior Teacher, PhD (Technical Sciences), Scientific Adviser

NINA S. MININA, Senior Teacher, PhD (Philology), English Language Adviser
O. M. Beketov National University of Urban Economy in Kharkiv

Quite frequently, we face the necessity of goods shipping. Nowadays this process has become a routine part of life for most people. This article is devoted