

Section 02. Geotechnical Systems Stability

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Tendencies of Coal Industry Development in Ukraine

Ukraine is a country with vast coal reserves of all grades. The estimated coal reserves in Ukraine are around 4% of the world coal reserves. We have three coal basins located on the territory of Ukraine: Donetsk, Lviv-Volyn and Dniprovsky. Donetsk coal basin is the largest of them. It contains 85% of all Ukrainian coal resources. Not a secret to anyone that coal takes over 95% of Ukrainian energy resources.

Currently, due to the hard geopolitical situation in Ukraine, the present state of the coal mining industry and its position in our country are of topical interest, and, in fact, an open issue. Unfortunately, military actions in Eastern Ukraine paralyzed a large part of domestic enterprises. The mine fund of Ukraine coal industry is in extremely difficult conditions. Nearly 96% of mines have worked for over 20 years without reconstruction. From the total number of coal mines, 64% have a life cycle of more than 50 years, of which 28% have been exploited for over 70 years. More than 40 mines carry out mining operations at the depth of more than 800 m.

DTEK Pavlohradvuhillia is the greatest operator in holding company “DTEK Energo” and produces the largest amount of coal accounting for 47% from total production in the country. DTEK Pavlohradvuhillia comprises 10 mines as well as transportation and production infrastructure enterprises. According to the data of 2016, the average production capacity of coal enterprises in Dnipropetrovsk region was 1.7 mln t. Coal takes only 29% in the structure of primary energy consumption in Ukraine. The main consumers of coal are power plants, population, metallurgical and coke plants. The peak of coal consumption was in 2012.

Coal in Ukraine is sold through direct contracts with mining companies and consumers or with the state enterprise “Vuhillia Ukrainy” as the operator of the wholesale market. The most important indicator of the quality of extracted coal is ash content. Ukrainian coal has high ash content, and it can't be used directly in energy and coking industries. Over 90% of all coal is processed at coal-preparation plants.

According to the analysis of the situation in coal industry, it is possible to formulate the perspectives of its development. By the end of 2020, coal industry will function entirely within market relations and the government will not regulate and subsidize the activity of coal enterprises. While coal consumption will be gradually reduced, the share of nuclear and alternative energies in the power balance of the country will grow. The experience of developed countries proves the necessity intensifying research activities to reach the efficient use of energy resources and reduce harmful impact on the environment. Exploring the feasibility of thermal energy of deep rocks, developing promising deposits, enhancing coal gasification, and utilizing mine methane gas are the main strategies for mining industry.