

ON THE PROBLEM OF PRESERVING THE PRODUCTION POTENTIAL OF UZBEKISTAN AMID REDUCED ENERGY RESOURCES

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Abstract. The paper considers the problem of preserving the production potential of Uzbekistan under conditions of reduced availability of energy resources. It outlines the main risks for energy-intensive industries and proposes directions for energy efficiency, diversification of energy supply and modernisation of production.

Keywords: production potential, energy resources, energy efficiency, industry, Uzbekistan.

Аннотация. Рассматривается проблема сохранения производственного потенциала Узбекистана в условиях сокращения энергоресурсов. Обозначены основные риски для энергоёмких отраслей и предложены направления повышения энергоэффективности, диверсификации энергоснабжения и модернизации производства.

Ключевые слова: производственный потенциал, энергоресурсы, энергоэффективность, промышленность, Узбекистан.

Annotatsiya. Maqolada energiya resurslari qisqarishi sharoitida O'zbekistonning ishlab chiqarish salohiyatini saqlash muammosi ko'rib chiqiladi. Energiya talab qiluvchi tarmoqlar uchun asosiy xatarlar belgilangan, energiya samaradorligini oshirish, energiya ta'minotini diversifikatsiya qilish va ishlab chiqarishni modernizatsiya qilish yo'nalishlari taklif etilgan.

Kalit so'zlar: ishlab chiqarish salohiyati, energiya resurslari, energiya samaradorligi, sanoat, O'zbekiston.





Production potential is the ability of an economy to produce goods and services at a given level of technology and resource availability. Energy is one of its essential conditions, especially for industries such as metallurgy, chemicals, construction materials and mechanical engineering. For Uzbekistan, whose economy has long relied on natural gas, the reduction of available energy resources has become a significant challenge [1].

Several factors contribute to this situation. Domestic demand for electricity and gas has grown with population increase and industrial expansion, while the output of existing fields and the condition of generating and distribution infrastructure limit supply [share of gas in the energy balance, specify source and year]. Seasonal peaks, particularly in winter, intensify the problem and sometimes require restrictions on consumption by enterprises.

The consequences for industry are manifold. Energy shortages interrupt technological cycles, increase equipment wear, reduce product quality and raise costs. Energy-intensive enterprises are especially vulnerable, since even short interruptions may cause losses disproportionate to the duration of the outage. In the longer term, unstable supply reduces investment attractiveness and may slow the localisation of production.

Preserving production potential therefore requires a comprehensive approach. First, enterprises should improve energy efficiency through energy audits, modernisation of equipment, recovery of waste heat and the introduction of energy management systems. International experience shows that reducing energy intensity is often cheaper than expanding supply [2]. Second, the energy mix should be diversified by developing solar and wind generation, hydropower and distributed generation at industrial sites, which reduces dependence on a single fuel. Third, the grid and storage infrastructure should be modernised to ensure reliable delivery. Fourth, tariff policy should combine economic signals with support for enterprises that invest in energy saving.



Human capital is also important. Engineers and managers capable of designing energy-efficient processes and managing energy consumption are a necessary condition for implementing these measures, which makes the training of specialists in regional technical universities and branches a strategic task.

Thus, the production potential of Uzbekistan can be preserved under energy constraints through a combination of energy efficiency, diversification of supply, infrastructure modernisation and development of qualified personnel.

REFERENCES

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