

ELECTRICITY SUPPLY SYSTEM IN UZBEKISTAN: PROBLEMS AND SOLUTIONS

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Abstract

In recent years, the economic growth dynamics of Uzbekistan have stabilized. This trend has a positive effect on the standard of living of the population. On the other hand, these two factors cause a constant increase in electricity consumption. Until 2030, the demand for electricity in the country is predicted to grow by about 6-7% per year. However, Uzbekistan is not ready for such a scenario. Because the existing capacities do not allow to fully satisfy the internal needs. If urgent measures are not taken, the problem of energy shortage will certainly be a hindrance to our development in the future.

Keywords: Energy, economic growth, trend, energy shortage, green energy, solar energy, sustainable development.

In recent years, fundamental changes aimed at developing the economy and improving the lifestyle of the population have been implemented in our country. Free economic zones, technological parks, and clusters are being established in various regions of the republic. Based on strategic programs such as "A Prosperous Village", "A Prosperous Neighbourhood", and "Safe City" huge creative works are being carried out in cities and villages, which are completely renewing their appearance [3]. Accordingly, tourism is also developing. In turn, more attention is being paid to the issue of environmental protection and ecological stability than ever before.

Such rapid pace of development observed in all spheres of society and state life, first of all, leads to an increase in the need for electricity.

For example, in 2000, one household user used 114 kWh of electricity in a month, and by 2024, this indicator will increase by 57 per cent and reach 200 kWh. At the same time, the share of the population in the general use of electricity in the republic this year reached 26.5% [4]. However, in 1990, this amount was 13.9 percent. Notice the differences in the middle!?

Let's dive deeper into the topic through numbers and facts, painful scenes. 90 per cent of electricity in our republic is produced in thermal power plants (TES). However, the majority of existing TESs, i.e. 84 per cent, were commissioned 50 years ago. Such devices left over from Almisak, of course, do not fully meet the requirements of the time. Because of their

extreme obsolescence, it reduces the amount of electricity production, causes a shortage, and also causes a large amount of used fuel to be consumed. As a result, the cost of produced electricity is also increasing. An ordinary consumer has almost no information about them [1]. It is important for them that the light is on at home, and how it is made and at what cost it is delivered is not even interesting to many. However, if the taxpayer reads the above and below information and draws a reasonable conclusion for himself, he will not be without profit.

Currently, the length of power lines of energy systems in our country is 254,8 thousand kilometres. Of these, 218,400 kilometres are low-voltage distribution networks with a voltage of 0.4-10 kV. 62.4 per cent of them have been used for more than 30 years. The distribution networks are very old, which leads to a significant loss of electricity. That is, at the same time, 20 per cent of the total electricity output from thermal power plants to the electricity grid is lost. Imagine: one-fifth of the light and heat source produced for us is flying into the air.

What should be done to eliminate such defects, eliminate defects and avoid waste? First of all, it is necessary to ensure the reliability and quality of electricity supply to consumers. For this purpose, the officials set themselves the following goals:

- modernization of energy devices of thermal power plants (40 per cent), renewal of electrical systems intended for the supply and distribution of electricity (57 per cent), transformer points (52 per cent) and substations (21 per cent);
- commissioning of new generator capacities (which will increase electricity production by 20-40 per cent);
- scheduled maintenance from time to time to keep existing energy equipment in working order...

Another issue that needs to be resolved is water and air. The cost of fuel and energy resources (natural gas, fuel oil, coal) makes up the main part of the expenses for the production of electricity. This indicator is now equal to 43% and considering that their prices are increasing in the world market, how correct is it to maintain the current tariffs for electricity?! Because when you add the cost of resources to the costs of use and arrears of payments, a painful picture of the problem is formed. Such problems can negatively affect the reliability and quality of the power supply.

Therefore, in our republic, special importance is attached to the implementation of renewable energy sources (solar, wind devices) in order to ensure thorough development of energy, stable supply of electricity to consumers, and environmental safety. After all, taking advantage of such benefits is an important factor in preserving natural resources for future generations and reducing the emission of harmful substances into the atmosphere caused by fuel combustion. A large amount of financial investment is required for the development of green energy. Attracting potential investors for the realization of projects in this regard will be possible only

at the cost of the introduction of economically attractive tariffs for electricity [2]. But is this indicator really attractive in our country, is it acceptable for investors?

Experts say that this is not the case, that is, the tariffs set for electricity in Uzbekistan are much lower compared to countries near and far abroad. For example, the price of 1 kWh of electricity is 5.1 cents in Kazakhstan, 5.8 cents in Russia, 5 cents in India, 5.6 cents in China, 9-14 euro cents in the EU countries, and 2.8 cents in our country.

In addition to low tariffs, the practice of applying economic sanctions for unreasonable and blind use of electricity, which is not established in the legislation, leads to the wasteful and inefficient use of this precious gift by consumers. Turning on the lights during the day, keeping the TV on regularly regardless of whether it's being watched, etc...

How to change the public's perception of this? What can be done to ensure that consumers use electricity more efficiently, economically and wisely? Is there a way to do this? If you find it, the snow will burn. Kars comes out of two hands. The only rational solution to this problem is for the state and the general public to jointly review the system of setting tariffs, to establish a strict amount of social norms for the use of electricity, taking into account foreign experience.

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