

STATE AND PROSPECTS OF USING ALTERNATIVE SOURCES OF ELECTRICITY IN THE CONDITIONS OF THE ANDIJAN REGION OF UZBEKISTAN.

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Abstract: In the present interest to use of non-conventional sources of electric energy around the world grows. The reason to it as it is known, are the arisen problems at development of electric energy by traditional ways. As an example intensive reduction of stocks of coal, peat, natural gas, products of oil, etc. which are necessary for obtaining warmth on thermal power plants, and also growing growth of expenses for their development can serve. Here it is necessary to consider still negative influences on environment ecology at operation of thermal electric plants.

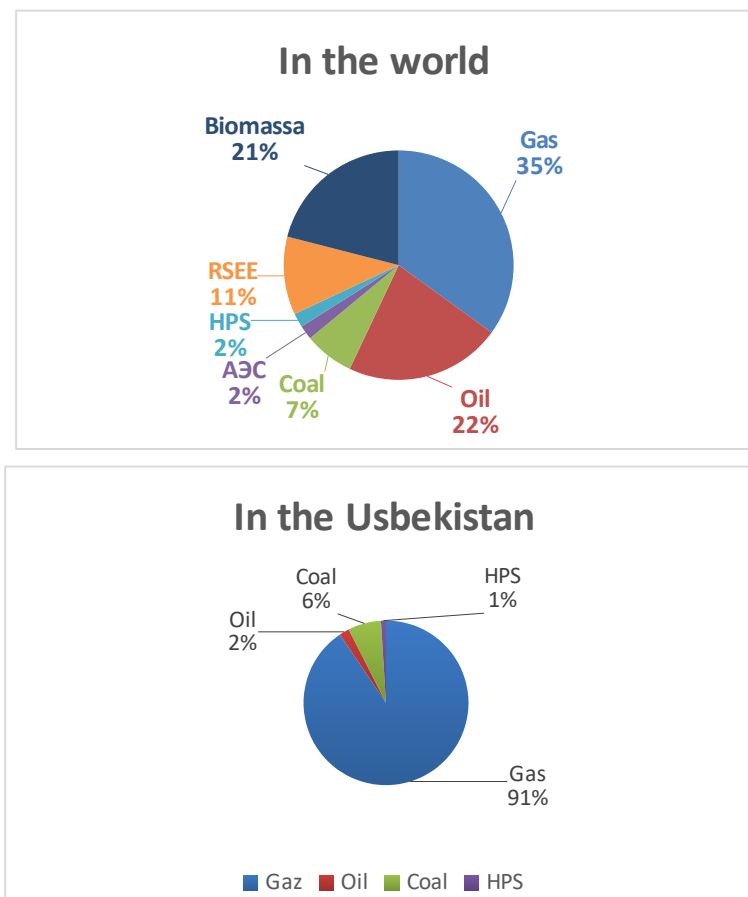
Key words: *Renewable energy, wind energy, energy sources, solar panels.*

In a place with that it is impossible to forget that coal, gas and oil are precious raw material for chemical industry the countrys.

Starting with above specified it is possible to tell that for the decision it is highest the specified problems of electro power of regions it is necessary to be guided by creation and to introduction of non-conventional sources of electric energy which have the features and advantages.

When we speak about non-conventional sources of the electric power, the sun, mini hydroelectric power stations (HPS) which are expedient for using in the conditions of our region should be guided by obtaining electric energy from a wind, biogas. For comparison and the analysis we give balance of energy resources in the world and Uzbekistan (image. 1).

Image 1. Balance of energy resources in the world and Uzbekistan



where, RSEE-renewable sources of electric energy;

HPS hydroelectric power station; APS - atomic power plants

It is necessary to mark out that, that in each of above listed a non-conventional source of electric energy there are features which to some extent depend on appointment, the location, character, and also to the requirements shown to them.

The carried-out analysis, and also operating experience give the grounds that among above specified decisions for our regions solar power stations and mini hydroelectric power station district expedient. Because, Uzbekistan has enormous potential for wide use, therefore introductions of solar power stations and mini HPS.

Settlements show, that the total annual amount of receiving the electric energy from a solnets in the territory of the republic can make near 1550... 1950 kW · h/m², therefore using only sunshine it will be possible provide annual

requirement of the electric power of all country. It is necessary to remember that receiving such quantity of electro energy will demand heavy financial expenses.

If to stop on essential photo-electric sources of electric energy, uses of such power plants demand the heavy expenses, therefore not all farms of the republic can get and use them. However, intensive development of a science and of technology give the grounds on positive solutions of this problem on the near-term outlook.

One more perspective direction of production of electric energy in the republic this use of biogas. Biogas use for obtaining electric energy is expedient for farms and to owners of a private sector engaged in animal husbandry. Using biogas they can partially provide need of an economy for electric energy.

Foreign experience shows, that in the present in the countries with the developed animal husbandry using biogas completely all technological process of cattle-breeding farms and complexes is provided with electric energy. Therefore it is possible to tell, as at us interest to this problem also grows in the country.

One thing more perspective direction of development of agricultural power in our region is production of electric energy with the help of mini HPS. Using such power plants it is possible to provide with the electric power of the next settlements, production objects, farms, etc. It should be noted that now on mountain regions of the republic sets of examples of use of mini hydroelectric power station meet. To that an example use of mini hydroelectric power station in mountain regions the Kashkadarya and Surkhan-Darya regions of the republic. It should be noted that now in the republic the electric energy in number of 52,0 billion kW · h in a year is developed, from them on thermal power plant to fall 85,5 % and hydroelectric power station of 14,5 %¹.

Taking into account that now there are no technical solutions and projects on use of available water resources of the republic on chair “Power of agriculture and all-technical disciplines” Andizhan agricultural and the

Andizhan machine-building institute searches in the solution of this problem are conducted.².

With confidence it is possible to tell that soon this task to receive the positive decision. To that an example the proposal of the managing director of a farm “Naynavo oqshomi” A.Urinboyev's Andizhan region on generation of electrical energy using water flow proceeding a collector located in the economy territory.

According to A.Urinboyev we in the country have great opportunities on use of water resources for obtaining electric energy with the help of small HPS. In the country are available a collector in extent about 100000 km. It is known that their main objective is improvement of meliorative conditions of fields and grounds. For the last 10...15 years, because of the fogging of the atmosphere, water levels in reservoirs have been reduced, which led to the of land. Therefore large amounts of water proceed on collectors. On A.Urinboyev's confirmation in farm collectors in extent of 10 km depending on a bias through everyone 2... 2,5 km can be constructed on one, and in all 4-5 mini power plants in capacity of everyone on 20... 50 kW.

In the present design and budget documentation on use of a collector of scientifically experimental farm proceeding on the territory “Naynavo okshomi” for construction of the cascade of mini hydroelectric power station are prepared.

On a project proprietary after construction of the cascade of mini hydroelectric power station in summertime water flow is used for watering of grounds and the rest of the time for electric power development, 30 which % are spent for own needs of a farm. The remained 70 % of the electric power it is delivered to local population with reduced prices.

According to preliminary data to itself cost of received agricultural production in an economy decreases on 15.... 20 %, therefore an economy in addition to receive 15... 20 million sum net profit. Possibility to create about 4 besides opens... 5 workplaces.

Conclusions:

As a result of the analysis prospect of development of power industry of the Andizhan region we recommended for introduction expedient non-conventional sources of the electric power, as solar and mini hydroelectric power stations.

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