



Natural Resources in Unconventional Energy Production Capacity on the Basis of the Study: A Case Study of Mirzachul Region

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Keyword: *natural resources, non-traditional energy, meteorological stations, wind and solar radiation resources.*

INTRODUCTION

The Republic of Uzbekistan achieved its independence, when radical reform in the field of rational nature use all the fields in the array also is to occur. Prospect currently in the country, that is, protection of the environment and on the rational use of natural resources developed the state program for the implementation of this program 2017-2021 promising and its execution produced a number of studies completed until now are reflected in the road map. The nature of all scientific and practical activities in the field of rational use and protection was established on the basis of the program. The program focuses on the work that is being done – “It is necessary to change the natural environment in the regions with a clear, scientifically justified approach that will ensure the effective and comprehensive use of natural resources”. In order to use natural resources in the regions, it is important to study them scientifically and to use technologies that do not affect the environment. In our research, we focused on the Mirzachul oasis to explore the possibilities of environmentally friendly, non-traditional energy based on natural resources that can be extracted from wind, water and solar radiation. This is an important issue in the field of integrated scientific research, based on the energy production of natural resources (water, wind, solar radiation), economic development of the region and a certain supply of energy needs of the population. Scientific research on the potential for alternative energy production and future production will reduce natural hydrocarbon resources (gas, coal, and oil), while reducing polluting SO₂ gases, which will result in a partial reduction in air pollution.

Currently, 90% of the Republic's electricity is produced at thermal power stations. In the process of their use a considerable amount of carbon dioxide and many gases are released. The Republic of Uzbekistan is a member of a number of international organizations for the prevention of pollution, including optimization of the ecological situation through the use of environmentally friendly energy resources and low polluting energy resources, gradually decreasing the amount of hydrocarbons fuel that is favorable to the fulfillment of the obligations set out in the Kyoto Protocol. Thus, renewable energy resources, in particular water, wind and the hot sun of mastering the energy of the most promising at present. While in this republic, available water, wind and solar radiation resources to do the research that determines how urgent. Energy sources the main alternative energy of the world in the near future. Considering that we can be this problem to the solution of today's pressing issues of the day. For example, during the commissioning, the WES does not require any fuel, and the 1 MW power unit can save up to 29,000 ton of coal or 92,000 barrels of oil in 20 years without any toxic gas emissions.

Uzbekistan's wind power sources have a capacity of 520,000 MW and a billion MW of electricity a year. Unlike other energy producers, they do not pollute the environment with harmful emissions. This type of 1 MW reduces the CO₂ emissions per year by up to 1800 tons of sulfur oxide (SO₂) and 9 ton of nitrogen oxide and 4 ton of carbon dioxide (CO₂). By 2050, the use of global wind power will reduce the annual CO₂ emissions by 1.5 billion tons from heat-generating stations. Another advantage of the WES is that they can compete with other non-renewable energy sources under certain conditions. More importantly, the wind that is the source of energy for the WES is insufficient, and experts say that wind

energy is more than 100 times the source of available water (hydropower) in all the rivers on the planet. It should be noted that the wind velocities of 7-14 kilometers above the ground surface are 10-15 times higher than the ground surface and the velocity of these flows varies almost throughout the year. In the future, scientific research and use will give them a sense of confidence in the vast potential of wind energy.

The republic of Uzbekistan Mirzachul region, including not only the sun but also wind and hydro resource rich regions. The electrical energy that gives meteorological stations that collect data for the study of wind resources located in the territory of the direction of the wind and learn from them and use in the production of energy, the speed also oasis (Jizzakh, Navoi region) on the basis of data taken from the department of water resources for hydropower and energy from their capacity to identify and elector, with a capacity of river burn in terms of getting the analysis it is necessary to make. This enriches more opportunities for alternative energy production. It is desirable to use low-energy and river-power energy for household farming.

There are currently no meteorological stations in the area (9 meteorological stations), but not covered all areas of the oasis. At the meteorological stations, the wind speed and direction are measured at a height of 10 meters. Buildings in the populated area, with high trees, will block the wind speed a bit. It is therefore of great scientific importance to conduct additional observations at the altitudes of 20 to 40 meters in populated areas. In some regions, local winds are formed, in some regions (in the areas adjacent to the Lake Aydarkul, in the Baliqlitag and Pistalitog, in the Jiliguli valley, in the Arnasai lake) in some parts of the region, while temporarily in certain seasons and months of the year, and there are long winds.

At the Samarkand State University, Faculty of Geography and ecology, the Geographical department, professor under the leadership of A. Rakhmatullaev, research works are being carried out since 2014. Two new locations to install devices which anemorumbometr measurements of wind speed and direction. Bulungur district of the province Eshmonto'p the first one in the village, the latter - Samarkand state university 9 stone to the roof of a building, at a height of 40 meters. Now analysis of data from the new location accurately.

We will use the experiences gained during our work in the Mirzachul region. First of all, we present our suggestions on the creation of wind maps and winds by analyzing wind speeds, directions and dynamics of change, with existing meteorological stations and meteorological stations located in the Jizzakh and Syrdarya regions and near border areas.

The electrical energy will start to give effective wind speed 3 meters second. According to meteorological stations, the average annual wind speed in the plain regions of Jizzakh and Syrdarya regions exceeds 3.0 m / sec. Spring and summer average monthly speeds are several times higher than the average annual average. These are up to 10 meters high. At 30-40 meters, the wind velocity is stronger. The federal republic of Germany "GEONET" company in Uzbekistan, Jizzakh and Syrdarya regions wind resources who go on learning in the research work also highlighted the wealth of wind resources, which gives the electric energy. The reason is that the winds blowing from the mountains surrounding the oasis and the "Bekabad" wind from the Fergana Valley are constantly being worn.

Winds from the northwest and north to the Mirzachul region are stronger. In the Chordara 43% of the winds blowing on the shores are north winds. The south-eastern winds of the province are characterized by strong winter-winds. The wind is strong in the Pakhtaarol region at a rate of 2.6-3.8 m / sec, in Jizzakh - 3.4-3.2 m / sec, in Mirzachul - 2.3-3.6 m / sec, in Hovos - 3.3-3.8 m / sec m / sec. The local wind to Mirzachul is the Bekobod wind. From the Fergana Valley through the Khojand Gate to the Mirzachul Plateau. The wind of Bekobod is mainly in winter, the gateway to the west, the cyclone in the west, the antilock when it comes to anticyclone in the east, and the wind speeds up to 30-40 m / s. Wind speeds in summer are not more than 15-20 m / sec. The hottest and dry winds are blowing summer in Mirzachul. When it comes to air, dust rises, the air temperature reaches 40 °, the soil dries out, and the dried out the trees and the trees are irrigated. Mountainous winds from the mountain mountains are also characteristic, characterized by constant wakefulness in some mountain ranges.

On the basis of the database, the resources of the Mirzachul springs are studied economically and the card is generated. More than 1.5 million people live in the Mirzachul valley, most of them live in rural areas.

The use of wind energy in the energy supply of the rural population and the energy needs of the rural population is crucial, and their construction does not require rapid and high funding. According to these features wind energy in the oasis is promising.

The majority of the population lives in the foothills of the Mirzachul valley and desert. For their fuel Molguzar cut off natural forests, shrubs and trees in the mountains of Nurata, and turuncillas, saxophone and other bushes on the Aydarkul valley. As a result, the soil is dumped in the foothills, where the spring and desert water is diminished, and the flood situation is intensifying, and soil erosion is increasing in the plains. In order to avoid these negative processes, it is necessary to supply the local population with fuel. The sooner and broader use of wind and solar energy in rural areas, we would be the largest event to improve the environment in which the energy needs of the population will be satisfied. That is, the use of wind, water energy, the types of cutting down the trees for fuel are severely degraded and the stability in nature is high.

The use of wind energy opens up opportunities for groundwater extinction on the plains, remote pasture farming and irrigated farming areas and develop irrigated farming with these waters. Wind energy development creates great opportunities for new jobs. Currently, more than 600,000 people are employed worldwide in the field of wind power industry. According to statistical data, total fossil fuels around the world have a capacity of 130 years for the needs of humanity, so it is time for the wider use of non-traditional energy sources. The establishment of wind power stations will have a positive impact on the employment level of the population and will create new jobs.

There are many wind sources in the plains and foothills of the vally. In the plain, often the winds tend to travel at a velocity higher than 5 m / sec. Therefore, wind speeds that begin to work at this speed work here (less than 30%), with little time left. In the northern region of the region, Pakhtakor, Arnasay, Dustlik, Mirzachul, Zafarobod and Forish rural districts are mainly located on the plains, where wind power stations can operate continuously. The wind speed in the foothills of the coast is of average 2.6-3.5 m / s. That is why, in the majority of the flooded areas, wind power installations are long; the time runs idle. Exceptionally, the mountainous terrain can be

found (at the speed of 5-6 m / s in the Jiliguli, Gallaoral, Baliqlitag and Pistolytes), located at the outskirts of the mountain hill. Solar panels can be avoided by placing them in these areas.

Energy absorption from the wind is mainly related to two factors: the wind speed and the length of the beaks. From wind speeds up to 2 m / sec, the hinges start to turn round and give less sieve. At this velocity, the 3.0 m long grooves provide 0.01 kwt, 4.0 m long, 0.02 kW. Winds with a diameter of 7 m where winds at a speed of 3m/sec and 4m / sec provide 0.23kW and 0.56kW of electricity at these frequencies.

When measuring the wind speed, the data is received 4 times a day at the wind measuring device: at 5:00, 11:00, 17:00, 23:00 Each removable this information in the following four hours is the main indicator. The wind velocity and direction in the upper parts of the atmosphere can be measured by probes and other methods.

In the Sangzor valley region of the Mirzachul region, four metrological stations at the Bulungur metrological station near Bahmal, Fallaorol, Bahorikor, average speed of the wind at 3-5 m / sec. Therefore, when generating wind generators in all Sangzor valleys and villages, it can generate a large amount of energy from them. But for some days, windless days can last longer. Together with the wind energy combined with the solar cells, the combined use of the solar energy is a great advantage.

The number of meteorological stations and posts currently operating is 6 in Jizzakh and 4 in Syrdarya region - 10 in total. The wind speed and direction at these stations and posts are measured at a height of 10 meters. Under the project plan we will create 4 new posts, and all of them will measure the wind speed at a height of 40 meters and determine the intensity of Solar radiation. In addition, in our plan, hand-held anemometers are occasionally used to measure wind speeds, and if more than one stationary post is used, automatic recording devices can be used.

The resulting database will be the basis for scientific assessment of the sources of energy and wind and solar radiation resources. By analyzing the data, maps of the wind and solar radiation resources of the Mirzachul oasis are formed. Wind speeds, wind speeds, and wind energy in the cards are clearly expressed in colors, tables, drawings and figures. In

addition, the intensity of the solar radiation and the change in speed are also reflected in the maps. Structured cards are a scientific basis for the installation of wind and solar equipment, but also play an important role in the distribution of energy for the population.

Conclusion:

Solving the above issues is an urgent task, and the implementation of this task plays an important role in the economic growth of the republic. Since gaining independence, it is important that the country has developed a roadmap for the implementation of legal and regulatory documents for the development of this sector, as well as for the development of the sector on the basis of natural resources such as all sectors. Furthermore, tax and payment privileges for economic incentives for non-traditional users will lead to a more consistent development of the industry in the future, which will play an important role in ensuring the environmental sustainability of the environment, causing environmental pollution.

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