



NATIONAL INVESTMENTS AUTHORITY
UNDER THE PRESIDENT
OF THE KYRGYZ REPUBLIC



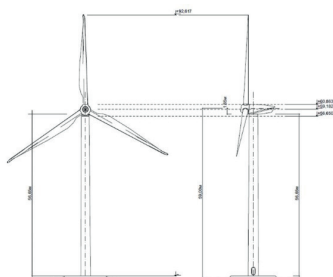
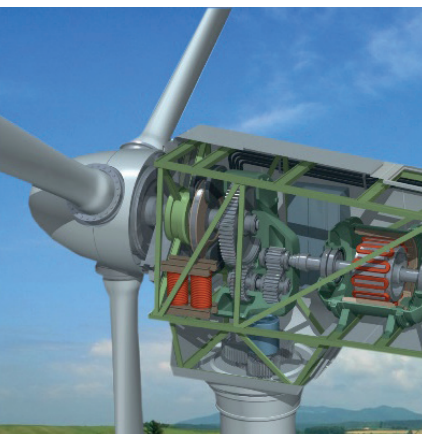
Organization for Security and
Co-operation in Europe
Programme Office in Bishkek

“AK-OLON” WIND POWER PLANT CONSTRUCTION PROJECT

“Kyrgyz Wind System” OJSC



KYRGYZSTAN



Name of the company:

“Kyrgyz Wind System” OJSC

Brief description of the Project:

The project involves the creation of a wind farm by erecting wind turbines in Ak-Olon village. The designed capacity of the wind farm is 60 MW, which requires the installation of at least 30 wind turbines with a rated capacity of 2 MW each, and the installation of crane bases adjacent to each turbine, internal roads, an internal electric grid, an electrical substation, which includes control room and connection to the electric grid. The implementation of the project will make it possible to create the first industrial wind farm in Kyrgyzstan and create an opportunity to enter the renewable energy market.

Description of the Project Initiator:

The Project Initiator is “Kyrgyz Wind System” OJSC. The main purpose of the Company was the creation of the first profitable and environmentally friendly wind farm in Kyrgyzstan, which will provide a steady stream of income from the sale of clean electric energy. As part of the project, 30 wind turbines will be launched to generate 60 MW of energy. The wind farm will provide sustainable electric energy to a part of the Issyk-Kul Region and simultaneously help prevent emissions of carbon dioxide and other harmful substances into the atmosphere. The annual environmental impact of WPP is equal to 35,000 cars removed from the roads. The wind farm will provide additional energy both for the Issyk-Kul Region and for the export under the CASA 1000 project.

Project cost - \$60,000,000

- ✓ Wind generators, internal electrical installations, substations and power lines - \$58,000,000
- ✓ Design and construction - \$1,200,000
- ✓ Unforeseen expenses- \$300,000
- ✓ Administrative expenses- \$500,000

Amount of investments - \$60,000,000

Payback period - 11.3 years

DESCRIPTION OF THE PROJECT

The project involves the creation of a wind farm by erecting wind turbines in Ak-Olon village. The designed capacity of the wind power plant (hereinafter referred to as the “WPP”) is 60 MW, which requires the installation of at least 30 wind turbines with a rated capacity of 2 MW each, and the installation of crane bases adjacent to each turbine, internal roads, an internal electric grid, an electrical substation, which includes control room and connection to the electric grid.

The implementation of the project will allow building the first industrial wind farm in the Kyrgyz Republic and create an opportunity to enter the renewable energy market.

The addition of wind energy to the energy supply will diversify the national energy portfolio and reduce dependence of Kyrgyzstan on HPPs, stabilize the cost of electricity, reduce vulnerability to price hikes and disruptions of supplies, and strengthen the security of the national energy supply.



The wind farm will provide additional energy for the Issyk-Kul Region. Moreover, the energy can also be exported. In addition to the local preferences, the construction of the wind farm will have an impact on the further socio-economic development of the region, and contribute to fulfilment of international obligations to reduce greenhouse gas emissions under the UN Convention on Climate Change, which the Kyrgyz Republic, a member of the Convention since 1997, has assumed.

The location of the “Ak-Olon WPP” project is Topurak-Bel, Ak-Olon village, near the town of Balykchy, Kyrgyzstan (located in the west of Issyk-Kul Lake, at an altitude of 1,700 meters above sea level).



The WPP has the following technical parameters:

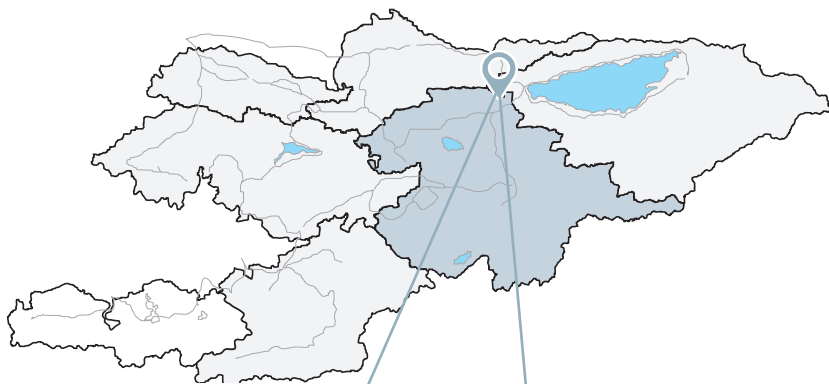
The territory of the site has good wind potential; net energy output of 60 MW, which would amount to more than 150 million kWh of energy annually.

Capital investment:

The capital investment for the construction of the wind farm will amount to USD 60 million (with a total wind power capacity of up to 60 MW).



GEOGRAPHICAL LOCATION OF THE PROJECT



DESCRIPTION OF THE PROJECT INITIATOR

The Project Initiator is the “Kyrgyz Wind System” OJSC. The main purpose of the Company was the creation of the first profitable and eco-friendly wind farm in Kyrgyzstan, which will provide a steady income from the sale of clean electric energy. 30 wind turbines will be launched to generate 60 MW of energy. The wind farm will provide a part of the Issyk-Kul Regions with sustainable electric energy and simultaneously help prevent emissions of carbon dioxide and other harmful substances into the atmosphere. The annual environmental impact will be equal to removing 35,000 cars from the roads. The wind farm will provide additional energy both for the Issyk-Kul Region and for the export under the CASA 1000 project.



The history of the Company's development:

2017-2019 - The Company initiated search for suitable site for wind farm and the process of concluded the land contracts with local authorities. While preparing the permit documentation, the Company's administration received the architectural and planning justification and approval from the Ministry of Culture and Information and Tourism of the Kyrgyz Republic, Civil Aviation Authority, Ministry of Emergency Situations of the Kyrgyz Republic, General Staff of Armed Forces of the Kyrgyz Republic, Technical Inspection and Environmental Protection, the State Committee for Industry, Energy and Subsoil Use of the Kyrgyz Republic, Kyrgyzgiprozem. The meetings with local authorities in Kok-Moinok village were held and the decision to allocate land for the construction of the wind farm has been approved. A 49-year lease agreement with the Karakol Free Economic Zone was signed. The design and preparation activities for the construction of a wind farm in the Karakol FEZ are being performed. Revenues from the sale of electric energy to the state; “Vostokelectro” OJSC is expected to be the main buyer of electricity.



SUSTAINABLE COMPETITIVE ADVANTAGES



Eco-friendly energy. The electricity generated by WPP does not lead to CO2 emissions or any other greenhouse gases.

Ergonomics of the project. The wind turbine and the main parts of the wind generators are located at a considerable height above the ground. The wind turbine is installed on the mast. The turbine takes up little space on the ground, so the surrounding area can be successfully used for households, including various buildings and structures, for example, for agricultural activities.

Increased tariffs of electric energy. According to the Renewable Energy Sources Act, the energy tariffs are set at the the maximum level in the country, with application of multiplying coefficients depending on the RES type. The coefficient for wind power installations is 1.3.



CASA-1000. The Kyrgyz Republic is a member of the CASA-1000 project aimed at creating a power line linking Central and South Asia.

Availability of electricity for the population. The use of wind generators is particularly important for isolated areas where electricity cannot be delivered by conventional means, and off-grid supply for such areas is the only option.

Low operating costs. Maintenance during operation is minimal.



PROJECTED FINANCIAL INDICATORS

The preliminary amount of investment for this project is **USD 60,000,000**. The calculations are based on the electric energy tariff set by the Medium-Term Tariff Policy of the Kyrgyz Republic for Electric Energy and Heat Energy for 2021-2025 approved by Resolution No. 192 of the Cabinet of Ministers of the Kyrgyz Republic dated September 30, 2021, and on stimulating coefficient for the generation of electric energy using wind power according to Act No. 283 of the Kyrgyz Republic "On Renewable Energy Sources" dated December 31, 2008.

According to this scenario, the tariff of sale of electric energy generated by the WPP will be 3.276 KGS*.

***According to the legislation of the Kyrgyz Republic, the project has the possibility of applying a reduced tariff with a coefficient of 1.3 for WPP for a period not exceeding 10 years.**

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Output	million kWh	120	135	142	150	150	150	150	150	150	150	150	150	150	150	150
Tariff	USD/kWh	0.0386	0.0386	0.0386	0.0386	0.0386	0.0386	0.0386	0.0386	0.0386	0.0296	0.0296	0.0296	0.0296	0.0296	0.0296
Revenue	million USD	4,632	5,211	5,428	5,718	5,718	5,718	5,718	5,718	5,718	5,718	4,400	4,400	4,400	4,400	4,400
EBITDA	thousand USD	4,384	4,751	4,825	4,887	4,887	4,887	4,887	4,887	4,887	4,887	4,368	4,368	4,368	4,368	4,368

- ✓ IRR at the end of Year 15 is 6.28%
- ✓ Project payback period is 11.3 years, discounted payback period is 14.3 years

SOURCES OF FINANCING AND APPLICATION OF FUNDS

Source of financing	Amount, USD
Financial investor	60 000 000
Total:	60 000 000

Application of funds	Amount, USD
Wind generators, internal electrical installations, substations and power lines	58 000 000
Design and construction works	1 200 000
Unforeseen expenses	300 000
Administrative expenses	500 000
Total:	60 000 000



A BRIEF OVERVIEW OF THE ENERGY SECTOR

Kyrgyzstan is rich in energy resources. Considering the rising temperature in the region that causes melting glaciers, with no changes in average precipitation, the reduction of water availability can be expected. Thus, the diversification of renewable energy sources should be considered as critically important for the country's energy security.

The Kyrgyz Republic is among the countries with significant renewable energy potential. However, the solar, geothermal energy, wind and biogas technologies are rarely used and only for in-house needs.

The new renewable energy technologies can provide a competitive energy supply, reduce the negative impact of conventional energy on the environment and health, open up opportunities for universal access to affordable, reliable, sustainable and modern energy sources for different categories of consumers, which is one of the commitments of the Kyrgyz Republic to achieve the UN Sustainable Development Goals (SDG-7).

Kyrgyzstan has significant potential in the wind power sector. This resource can be used both in the large cities and remote areas and villages. At the same time, WPPs do not need extensive construction, and their maintenance is cheap. Modern technologies allow organization of the electric energy supply to the consumer within the shortest time possible.

In addition, with a view of development, effective use of renewable energy sources, improvement and diversification of energy resources, the Kyrgyz Republic adopted the Renewable Energy Sources Act, which stipulates that producers of electric and heat energy using renewable energy sources (hereinafter referred to as the RES) have, but are not limited by the following preferences: tax and customs preferences, guaranteed purchase of generated electric energy, application of reduced tariff for the project payback period (maximum applicable tariff for electric energy with application of the coefficient of 1.3).

The positive side of WPP - this is an eco-friendly, quick-to-build, easy-to-operate and stable source of electric energy generation. There is no environmental damage during both construction and operation of a wind power plant.



Additionally, under the CASA-1000 project, Kyrgyzstan together with Tajikistan should start exporting electric energy to Pakistan and Afghanistan in 2023. Electricity is expected to be sold in summer. Kyrgyzstan plans to export more than US\$1.5 billion worth of electric energy over the 15 years of the project implementation.



OFFER FOR INVESTOR

LEGAL MECHANISM	✓ Open Joint-Stock Company
TYPE OF FINANCING	✓ BOT/BOOT
AMOUNT	✓ USD 60,000,000
FINANCING TERM	✓ Up to 17 years
NUMBER OF TRANCHES	✓ Phased financing for the construction of a WPP
FINANCIAL SUPPORT	✓ As agreed by the parties





