**RENEWABLE ENERGY AND ITS IMPACT: CASE OF CENTRAL ASIAN COUNTRIES**

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**Overview**

The strategy “Uzbekistan –2030” of the Republic of Uzbekistan envisages increasing the share of electricity consumption using renewable and alternative energy sources more than 40% by 2030. Regarding country’s energy system is changing gradually, and rapid development of renewable energy sources. The country attracts investment to implement of renewable energy. Among the Central Asia countries renewable energy almost is not realized except Kazakhstan that began to promote through investment incentives and take one of the lead Central Asia countries. In this paper reveals the main causes and problems of the transition to renewable energy and potential available of each Central Asia countries. There is analysis about policy of renewable energy with concentrated on local energy electricity and grid. The results show that implementation of renewable energy in Uzbekistan more difficulty because of investment attractiveness, in Kazakhstan has problems decentralized consumption, the rest of Central Asia countries absence of any decree or adjustments refer to implement of renewable energy. There for, Uzbekistan approved several decrees considering improving green economy, wind-, solar and hydro-renewable energy to develop the quality of living standard, social life, and energy available to urban and rural population.

**Methods**

To explore the situations and policy of the renewables in Central Asian countries we gather materials and literature from international and local sources. Afterwards, we title each country separately: Uzbekistan, Kazakhstan, Kyrgyzstan, Tajikistan and Turkmenistan and give systematically information about potential, targets, and policy of renewable energy all of the CA countries. This research reveals comparison regional study among CA as well.

**Results**

The main goals of developing renewable energy in Central Asia are to transform the energy sector, providing access to more diverse recourses, ensure the economic growth and leave a minimal carbon dioxide (CO2) to change the climate situation in the region. In addition, renewable energy can also be impactful by providing energy to those who are live in rural areas, disconnected from central power grids or facing recurrent and extended outages regularly. Therefore, the countries which located in the region of Central Asia have to identify and establish priority actions that will encourage renewable energy development. Central Asia has all the potential to create a sustainable energy industry: 5.5% of the world’s cost-effective hydropower potential, mainly in Tajikistan and Kyrgyzstan; the presence of an average of 3000-3600 hours of solar radiation per year on the territory of Kazakhstan, Uzbekistan and Turkmenistan; and the wind potential at the Jungar gates alone in eastern Kazakhstan is 1.3 trillion. kWh per year. Renewable energy is alternative energy that substitute fossil fuel energy and gives the opportunities to achieve sustainable development, energy access, energy security and low-carbon economic growth and prosperity and will allow Central Asian states to the following priorities:

- meet the rapidly growing energy needs that population growth causes;

- reduce the environmental impact of fossil fuels;

- resolve matters of energy security, particularly in those areas with limited connections or no connection to central power supply networks.

Among the Central Asian countries Uzbekistan has rapidly increase the development and interest to renewable energy. The reasons are that the county’s population is higher than other CA regions and technology not updated after Soviet Union.

Kazakhstan pledged to reduce its CO2 emissions by 25% when it signed the Paris accord, agreeing to achieve this reduction by 2030. The country’s Green Economy initiative is even more ambitious, with targets to reduce carbon dioxide emissions by 40% by 2050

Kazakhstan and Kyrgyzstan have introduced feed-in tariffs, while Kyrgyzstan and Tajikistan are trading renewable energy certificates. Turkmenistan has the fourth largest natural gas reserves in the world with the capacity of 17.5 trillion cubic meters. The country prioritizes the gas sector in its development agenda, which is more environmentally friendly in comparison to oil and coal, though it still negatively impacts the environment. Its only renewable energy facility is the 1.2 MW Gindikush hydroelectric power stations, which celebrated its 100th anniversary in 2013. Therefore, Turkmenistan has not outlined a renewable energy development policy of any kind. It is important for Turkmen authorities to officially recognize the potential contribution of renewable energy in improving the living standards of the population, especially in those regions that are off -grid. Including renewable energy in the government’s agenda would drive development of a sustainable energy strategy to ensure clean and abundant electricity.

**Conclusions**

This field of economic sector directed to decrease the cost of energy and involve the growth and sustainability development of the nation. According to this benefit, there are some difficulties to develop of transition renewable energy management in Central Asia. Moreover, implementation of renewable energy is complicated for the rest CA. According of the study, the renewable energy directed the growth of living standard and increases the income of nation Central Asia. In addition, renewable energy improves and gives the solutions to the problems of climate change situation in Central Asia that causes by using fuel energy