

GREEN FINANCE IN KAZAKHSTAN

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The concept of Green Finance is one of the most discussed topics among business issues. Kazakhstan, despite being new in this area has made substantial progress in regulatory reform in support of the Green Economy. Green financing refers to products and services, managing environmental risks, organizational strategies, organizations themselves, as well as investment sectors, industry initiatives and policy instruments.

The main aim is to provide environmental benefits in the broader context of environmentally sustainable development. These environmental benefits include, for example, reductions in air, water and land pollution, reductions in greenhouse gas (GHG) emissions, improved energy efficiency while utilizing existing natural resources, as well as mitigation of and adaptation to climate change and their co-benefits. The key moment of this whole initiative is to better manage environmental and social risks while benefit from greater accountability.



Why Green Finance is important

To begin, the development of Green Finance occupies a vital role among trends in business development. It advances and underpins the stream of financial instruments and related services aimed at improvement and execution of feasible commerce models, economic, investments, exchange, financial and social projects and arrangements.

Our planet and people suffer daily from pollution caused by manufacturing outcomes. Many business developments are used to prevent and reduce irreparable harm from pollution. Examples include promotion of renewable energies, water sanitation, environmental audits, reducing industrial pollution, deforestation, and the carbon footprint.

Green Finance represents the financial sector's future through innovative financial tools and by supporting the investments in projects with positive and sustainable externalities. It consists of all the initiatives undertaken by private and public companies in developing, promoting, implementing and supporting projects with green impact through financial instruments.

Strategy – Physical Modification of the Economy

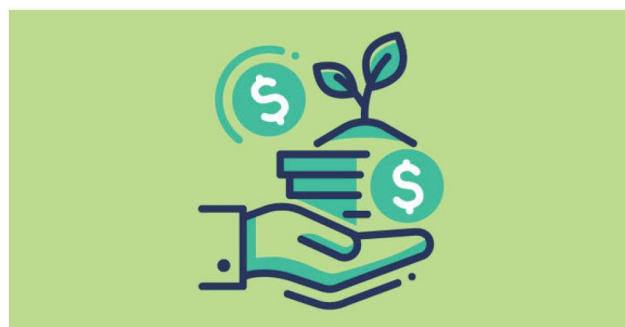
The transition towards a Green Economy requires investment, adequate funding and Kazakhstan's readiness to implement and use green projects. Global pollution is a problem that can be improved at the country level. Therefore, some experts reasonably believe that in order to operate harmoniously, physical modifications of the current national economy should be introduced. Basic adjustments could include:

- environmentally friendly energy saving;
- an increase of energy efficiency;
- sustainable mobility;
- enhancement of material efficiency;
- the recycling economy;
- ecological sustainable water management;
- ecological sustainable agriculture.

These changes beside huge financing may require corresponding corrections in the economy itself. In addition, this initiative may require significant time, social promotion of the importance of ecology and its future development. Thus, the transition to the Green Economy can be a longstanding process, but a process that benefits future generations.

Green Finance in Kazakhstan: Overview

Kazakhstan has undertaken measures towards development of the Green Economy. For example, as Kazakhstan progresses towards a Green Future, in addition to many other legislative acts (*Environmental Code of 2007*, *New Environmental Code of 2021*, *Water and Forestry Code of 2003*, *Law on Support for Renewable Energy of 2009*), it is adopting the *Strategic Plan for Development by 2025* which includes Green Growth and environmental protection.



The *Strategic Plan* contains two indicators on the energy intensity of GDP (gross domestic product) and the share of renewable energy sources that relate specifically to the country's Green Economy and environmental protection agenda. Before that, in 2013, the *Concept on Transition to a Green Economy* was adopted ('*Green Economy Concept 2013*'). It provides an important foundation for how Kazakhstan should move forward with its Green Growth agenda and its action plan for 2013 - 2020.

Moreover, the country's government has ambitious goals to cut greenhouse gas emissions under the *Paris Agreement* (COP21), and to increase the proportion of renewable energy in its total production 3 per cent by 2020, then to raise it further to 30 per cent by 2030 and to 50 per cent by 2050. To help Kazakhstan achieve these goals, the *European Bank for Reconstruction and Development* (EBRD), as one of the largest investors in this sector, has earmarked €200 million for renewable energy projects in Kazakhstan, with signings of specific renewables projects expected in the near future.

The EBRD has already invested nearly €1.5 billion in green projects in Kazakhstan and cooperated extensively on regulatory reform and the country's innovative carbon-trading scheme. The *AIFC Green Finance Centre* was created especially for this purpose on 1 June 2018 with the aim of developing and promoting Green Finance in Kazakhstan and the Central Asian region. The Centre provides initial assistance to potential issuers, investors, and market players for preparations to issue green bonds on the *AIFC Exchange* (Astana International Exchange).

One significant event in the transition to a Green Economy is adoption of the new *Environmental Code* with its "polluter pays" principle: "... the polluter should bear the expense for carrying out measures decided by the government to ensure that environment is in an acceptable state." This implies pollution prevention and control measures, as well as responsibility for repairing damage caused to the environment. Polluters are required to use the best available technology (BAT). If the polluter rejects BAT, then the emissions payment becomes more costly: the payment will double, then increase four, even eight times over.

Kazakhstan and the Green Economy

However, Kazakhstan has yet to move in this direction. Due to the country's territory and climatic conditions, despite Kazakhstan's significant potential for the development and implementation of renewable energy projects, obstacles still exist to the introduction and development of RES, such as low prices for electricity produced by traditional methods. Power plants operating on traditional fossil fuel in Kazakhstan are more competitive in price compared to renewable energy sources.

For example, *Ekibastuz GRES-1*, a coal-fired thermal power plant, produces electricity at a price of 8.65 tenge, while the tariffs of the *Ereymenau* wind power plant amount to 22.68 tenge. Kazakhstan also has the largest recoverable coal reserves in Central Asia and is the second largest coal producer in the region. More than 70 % of Kazakhstan's electricity is currently produced in coal-fired plants served by cheap local coal in the north-east of the country, which also produces a huge volume of carbon emissions.

Another challenge is related to power transmission losses and inefficient technologies. Large heat losses occur in Kazakhstan's housing stock as a result of the fact that houses built in the 1950s and 1980s (one third of all residential housing) need repairs. At present the housing stock is losing over 30% of thermal energy. An audit of energy efficiency and measures to reduce heat loss are required back to the Soviet era. Nowadays, few small- and medium-scale hydropower plants are developed.



According to the *National Green Economy Report 2014-2016*, water-saving technologies have increased the productivity of water resources in agriculture by almost 1.5 times. But despite the measures taken, water costs for irrigation remain high. The widespread access to water resources, especially in rural areas, has not yet been established.

Waste recycling is another issue that may be resolved with adoption of the new *Environmental Code*. However, the annual volume of solid waste in the country is 5-6 million tons and only 3% is recycled, while the rest is disposed.

Taking into account the increasing demand for electricity, existing power facilities must be enhanced by construction of new eco-friendly power generation plants that will work effectively even in the cold and windy conditions of the country's north-east region.

Green Finance in Practice in Kazakhstan

Given Kazakhstan's geography, climate, and limited hydropower, solar and wind energy are the most promising renewable sources of energy. Kazakhstan already has several working renewable energy sources.

Currently Kazakhstan has about 90 renewable energy facilities with an installed capacity of more than 1,000 MW. Since the beginning of 2019, 21 renewable energy facilities with a capacity of 504.55 MW have been commissioned. The number of renewable energy sources is planned to increase from 90 to 108 projects in the near future.

Kazakhstan has a list of renewable energy facilities operating on diverse energy sources. The largest **Solar Power Plants (SPP)** in Kazakhstan are *Burnoye-1 SPP* (50 MW), *Burnoye-2 SPP* (50 MW), *Gulshat SPP* (40 MW), *Shollakorgan SPP* (50 MW), *Zadariya SPP* (14 MW), and *Saran SPP* (100 MW).

Kazakhstan has more than 30 **Hydropower Plants (HPP)**. The largest are *Shulbinskaya HPP* (702 MW), *Bukhtarma HPP* (675 MW), *Kapchagai HPP* (364 MW), *Ust-Kamenogorsk HPP* (355,6 MW) and *Moynak HPP* (300 MW).

Wind power plants (WPP) are *Yerementau WPP* (45 MW), *Kordai WPP* (21 MW), and *K-1 WPP* (1,6 MW). These projects have been driven by legislative changes funded by international financial institutions and the guaranteed purchase of the renewable energy by the state-owned operator. However, apart from development of renewable energy, there are no other green projects attractive to private investors.

With the adoption of the new *Environmental Code*, in addition to the development of renewable energy there are other green projects that might be attractive to private investors.

For instance, the new Code provides the principle of waste hierarchy aimed at the stage-by-stage waste management, which includes waste minimization, recycling, reuse and disposal. Accordingly, there is potential for development of recycling and utilization projects. Favorable conditions will be created for investors wishing to implement such projects. Starting from 2021, pilot projects aimed at waste recycling will be conducted in six cities for conversion to electricity, and this energy will be sold through auctions to the country's general energy grid.

Conclusion

Kazakhstan has vast potential for development of a Green Economy that can drive sustainable and inclusive economic growth, providing affordable electricity to the most distant regions. Transition to a Green Economy is no longer an option, but a necessity.

It is crucial to understand that further development of the Green Economy in Kazakhstan requires investment of significant resources, both human and financial. This requires complex reform of the national economy and legislation, investment and environmental frameworks, and special tools to support business and individuals on the path towards a Green Future for Kazakhstan.

