

THE RENEWABLE
ENERGY LAW
REVIEW

FIFTH EDITION

Editor
Munir Hassan

THE LAWREVIEWS

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KAZAKHSTAN

*Shaimerden Chikanayev*¹

I INTRODUCTION

As at June 2022, Kazakhstan has 136 renewable energy plants with a capacity of up to 2,065MW, made up of 40 wind power plants, 51 solar power stations, 40 hydroelectric power stations and five biofuel power plants. The potential for foreign investment in the Kazakh power sector is huge. For instance, to cover the needs of the local economy and the population alone, the commissioning of at least 17.5GW of new power generation will be required by 2035. According to the Ministry of Energy, the proposed structure for the new energy capacity required by 2035 will be as follows:

- a* more than 5.1GW of gas generation;
- b* more than 2.1GW from hydroelectric power plants;
- c* 1.4GW of coal generation;
- d* more than 6.5GW from renewable energy sources; and
- e* more than 2.4GW of nuclear generation.

Moreover, waste-to-energy projects under Kazakh laws are de facto equated to renewable energy projects. Generally, approximately 4 to 5 million tons of solid household waste are generated annually in Kazakhstan. Of this, 18.3 per cent is for recycling, whereas the rest – over 80 per cent of waste – is currently buried in landfills. The Kazakh government plans, therefore, to commission 100.8MW of waste-to-energy plants in six major cities of Kazakhstan (Aktobe, Almaty, Ust-Kamenogorsk, Nur-Sultan, Karaganda and Shymkent) no later than July 2026.

The goals, forms and directions of support for the use of renewable energy sources as well as the regulation of mechanisms for supporting energy waste utilisation and the use of secondary energy resources² are defined in Law of 4 July 2009 No. 165-IV on Support for the Use of Renewable Energy Sources (the Law on RES).

Under Kazakh law, ‘renewable energy sources’ are defined as continuously renewable energy sources that derive from naturally occurring processes, including the following types:

- a* solar radiation energy;
- b* wind energy;
- c* hydrodynamic water energy;
- d* geothermal energy from the heat of soil, groundwater, rivers and reservoirs; and

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2 Under Kazakh law, the term ‘secondary energy resources’ means energy resources formed as a by-product in the process of industrial production in terms of the use of ferroalloy, coke and blast furnace gases used for the production of electric energy.

- e anthropogenic sources of primary energy resources such as consumption waste, biomass, biogas and other fuels from consumer waste used for the production of electrical or thermal energy.

In accordance with the Environmental Code of the Republic of Kazakhstan dated 2 January 2021 No. 400-VI (the Environmental Code), the term ‘energy waste utilisation’ (or waste-to-energy) is defined as a process of thermal treatment of waste aimed at reducing its volume and generating energy, including using it as a secondary energy resource, with the exception of obtaining biogas and other fuels from organic waste. Processing of any municipal solid waste is, generally, allowed. However, Kazakh law provides an exhaustive list of waste that cannot be subject to energy waste utilisation (e.g., liquid waste, lithium, lead-acid batteries and waste containing persistent organic pollutants).

There have been – and, in at least the near future, there are expected to be – two major obstacles in the further development of renewable energy projects in Kazakhstan:

- a a deteriorating electricity transmission and distribution infrastructure, which complicates the integration of various renewable energy sources in Kazakhstan’s electricity system; and
- b a lack of a sufficient number of generating units with a manoeuvrable generation mode³ – unlike, for instance, Uzbekistan, Kazakhstan has a shortage of flexible (peak) production capacity in the national electricity system, while the deployment of renewable energy sources requires flexible power plants to compensate for the absence of wind or lower solar irradiance.

To address these problems, the government has developed a number of measures, including stimulation of the construction of gas power plants.

II THE YEAR IN REVIEW

Civil unrest in Kazakhstan in January 2022 (the January Tragedy) was triggered by the cancellation of state subsidies on liquefied petroleum gas, and gave impetus for long-overdue political and economic reforms in the country. In the electric power sector, in particular, the following developments are expected.

By the end of 2022, the Competition Agency is expected to formulate its ‘Concept of Protection and Development of Competition in the Republic of Kazakhstan until 2026’, which will be aimed at demonopolising key commodity markets – including domestic electricity markets – and creating a favourable competitive environment for business.

In March 2022, the Ministry of Energy adopted the ‘Energy Balance Plan for Kazakhstan until 2035’, on the basis of which the ‘Concept for the Development of the Electric Power Industry until 2035’ is currently being prepared.

By the end of 2022, Kazakhstan is expected to formulate its ‘Doctrine on Achieving Carbon Neutrality of the Republic of Kazakhstan by 2060’.

The current Law on RES does not regulate the production and use of all alternative energy sources, namely sources such as hydrogen, industrial gases, coal seam gas methane, biofuels or solid household waste. To address this issue, the Ministry of Energy is currently

3 A generating unit with a manoeuvrable generation mode is a generating unit with adjustable electrical power. Manoeuvrable facilities include hydroelectric power plants and gas turbine power plants.

working on the draft for the Law on the Development of Alternative Energy Sources. The country's hydrogen energy development strategy is also expected to be unveiled by the Ministry of Energy by the end of 2022.

III THE POLICY AND REGULATORY FRAMEWORK

i The policy background

The most important policy document for the renewable energy industry in Kazakhstan – the 'Concept for the Transition of the Republic of Kazakhstan to a Green Economy by 2050' – sets a target of 15 per cent of energy in the energy mix to be from renewable energy sources by 2030 and 50 per cent of energy in the energy mix to be from solar, wind, hydroelectric and nuclear power plants by 2050. Approximately 3.7 per cent of energy is generated from renewable energy sources as at June 2022 in Kazakhstan.

Notably, the Law on RES protects investors against the risk of regulatory changes to the subsidy regime, by freezing (stabilising) the subsidy for existing investors.

ii The regulatory and consenting framework

The key law governing electricity supply in Kazakhstan is the Law of 9 July 2004 No. 588-II on the Electric Power Industry (the Power Law). Energy is considered a *sui generis* good under the Power Law.⁴ In Kazakhstan, the electricity market is divided into wholesale and retail markets, whereas the thermal energy market consists of one level – the retail market. The following comprise the wholesale electricity market:

- a energy-producing organisations;
- b energy transmission organisations;
- c energy supply organisations;
- d consumers of electric energy;
- e KEGOC⁵ as the system operator;
- f operators of the centralised trading market;⁶ and
- g the Financial Settlement Centre (FSC)⁷ for the support of the development of renewable energy sources.

4 Energy (i.e., all types of energy, including electric, thermal and nuclear energy) is generally considered to be a physical object and movable property in Kazakh legal literature.

5 KEGOC acts as the system operator and is the national transmission grid operator of Kazakhstan, 90 per cent of the shares in which are held by the Sovereign Wealth Fund Samruk-Kazyna (Samruk-Kazyna). The sole shareholder of Samruk-Kazyna is the state.

6 The operator of the centralised trading market carries out centralised trading of electric energy, including spot trading of electric energy and a service for maintaining the availability of electric power. As of 2022, joint stock company Kazakhstan Operator of the Electric Power and Power Market (KOREM) no longer has a monopoly right to the role of operator of the centralised trading market. Accordingly, it is expected that private operators will appear in the centralised trading market in the near future, which will be determined by the Ministry of Energy on a competitive basis in accordance with the rules for organising centralised trading of electric energy. The sole shareholder of KOREM is Samruk-Kazyna.

7 The FSC is a company wholly owned by the state. The FSC acts as the single offtaker of electricity for renewable energy projects, waste-to-energy projects, flood electric power and of the capacity for conventional power projects.

The regulation of the renewable energy sector is carried out by many state authorities, the most important of which are the following.

Among other things, the central government develops the main directions of state policy in the field of the use of renewable energy sources and, in certain cases, provides state financial support (i.e., indirect state guarantees) to the FSC if the FSC fails to meet its contractual obligations of a designated single offtaker under the power purchase agreement (PPA) in relation to a renewable energy sources project.⁸

The Ministry of Energy implements state policy in the field of support for the use of renewable energy sources as well as approves the renewable energy sources facilities allocation scheme, taking into account the targets for the development of the sector.

Finally, local executive bodies of regions, cities of republican significance and the capital Nur-Sultan reserve and provide to investors land plots for the construction of renewable energy sources facilities in accordance with Kazakh land legislation.

IV RENEWABLE ENERGY PROJECT DEVELOPMENT

i Project finance transaction structures

To date, Kazakhstan has managed to create a good and bankable legal and institutional framework for the development of renewables and waste-to-energy projects as, generally, such projects are procured on an independent power producer model, whereby a government designated entity (i.e., the FSC as a single offtaker) enters into a long-term (15 years for waste-to-energy and 20 years for renewables projects) PPA with a private sector entity to purchase power at a fixed auction price from the project, subject to annual indexation.⁹

ii Power purchase

Renewable energy

Unlike conventional energy projects, renewable energy projects in Kazakhstan do not have to participate in the capacity market and, therefore, investors in renewable energy projects in Kazakhstan have only one source of income and compensation for expenses: the proceeds from the sale of electric power.

8 Interestingly, Kazakh law does not provide similar mechanism of indirect state guarantee to strengthen the FSC's creditworthiness as a single offtaker for waste-to-energy projects.

9 Other measures of state support include that renewable energy generators are exempt from payment for electricity transmission services; financial settlement of imbalances due to renewable energy sources is carried out by the FSC; priority dispatch for renewable energy generators; the energy transmission company has no right to refuse to connect the renewable energy facility due to lack of network availability; the energy transmission company bears the expenses for the network's reconstruction and expansion; and land plots and connection points are reserved for renewable energy auctions. Kazakh law provides investment preferences for renewable energy projects. A renewable energy project can qualify as a priority investment project for the purposes of Kazakh law if it meets certain criteria that enable it to seek the investment preferences available for priority investment projects (in addition to those available for ordinary investment projects, such as a land plot for free use and an exemption from customs duties for a period of up to five years) including, among other things, tax preferences in the form of corporate income tax and land tax exemptions (for up to 10 years), as well as a property tax exemption (for up to eight years).

Importantly, a renewable energy-producing company has the right, at its discretion, to sell the produced electric power using one of the following two options:¹⁰

- a Option I – guaranteed offtake, whereby state-owned company FSC¹¹ as a single offtaker enters into a 20-year PPA¹² with a renewable energy-producing company to purchase all power at a fixed auction price determined based on the results of an electronic auction¹³ and taking into account the indexation mechanism provided by the Law on RES; or
- b Option II – open market, whereby an investor may opt to implement a renewable energy project without guaranteed offtake by the FSC and, therefore, a renewable energy-producing company may wish to sell electric energy not to the FSC at fixed auction price, but to any other consumers at negotiable prices and terms according to concluded bilateral PPAs.

Notably, once a renewable energy-producing company has used Option II once, it cannot switch back to Option I.

To develop renewable sources of energy, Kazakhstan has introduced an electronic auction system, which has made the process of granting renewable energy projects open and transparent, and given impetus to the implementation of the most cost-effective projects.¹⁴ At least three months before the expected date of the auction, the Ministry of Energy develops and publishes on its website the schedule of the auctions for the relevant calendar year. The schedule provides information about the land plots planned to be allocated for the construction of renewable energy facilities and the points of connection to the electric networks of energy transmission organisations, indicating the maximum allowable capacity and the number of possible connections.

Unlike auctions for the waste-to-energy projects as discussed below, to participate in the renewable energy sources auctions, an investor must meet the qualification requirements

10 It should be noted that almost any investment project in the energy sector, including renewable energy projects, can be implemented under the legal framework of either the Law of the Republic of Kazakhstan dated 31 October 2015 No. 379-V on Public–Private Partnership (the PPP Law) or the Law of the Republic of Kazakhstan dated 7 July 2006 No. 167-III on Concessions (the Concessions Law). Therefore, although new renewable energy projects are generally expected to be implemented under the specialised legal framework of the Law on RES, they may also be implemented under the legal framework of the PPP Law or the Concessions Law on the basis of the public–private partnership (PPP) agreement or the concession agreement, as applicable. Foreign investors that consider investing in big renewable projects in Kazakhstan, in particular, may wish to consider the PPP legal framework instead of the specialised legal framework under the Law on RES because it gives more flexibility and, in theory, can secure better bankability for the project. It can even, in certain cases, enable getting a project without open tender or auction through direct negotiations.

11 The FSC is a company wholly owned by Kazakhstan. The FSC acts as the single offtaker and conducts the centralised purchase and sale of electricity for renewable energy projects and electricity produced by waste-to-energy plants.

12 Such PPAs shall strictly follow in form and substance the template PPA for renewable energy sources projects as promulgated by law.

13 KOREM acts as the organiser of the auction for both renewable projects and waste-to-energy projects.

14 It should be noted that, generally, auction is required only for Option I. Option II suggests that an investor is ready to implement renewable energy sources projects without any or with just limited assistance from the state and, therefore, an investor does not need to participate in any auctions to implement its project.

only for its legal capacity and solvency by providing certain documents as specified in the legislation, but it does not have to prove any experience of creating and operating renewable energy facilities.

Auctions are conducted anonymously and remotely online through the joint stock company Kazakhstan Operator of the Electric Power and Power Market online trading system and in the form of a unilateral auction.

Based on the results of auctions, the FSC concludes PPAs with relevant winners of the auctions¹⁵ and, as a single offtaker,¹⁶ purchases all electric energy generated by a renewable energy plant for 20 years from the date of commencement of comprehensive tests and the date on which the electricity produced in the course of the trials was initially supplied to the unified electric power system of Kazakhstan; or from the date of expiry of the deadline for submitting the acceptance certificate of the facility in accordance with the PPA, whichever comes earlier.

Notably, the fixed auction price, determined based on the results of the electronic auction, in any case cannot exceed the current maximum auction price (the statutory cap) as approved by the Ministry of Energy for the applicable renewable energy source. For instance, current maximum auction prices for renewable energy sources are as follows.¹⁷

Renewable energy technology type	Tariff amount (tenge per kWh)
Wind power plants for wind energy conversion	21.53
Photovoltaic solar energy converters for solar radiation energy conversion	16.96
Hydroelectric power plants	15.2
Biogas plants	32.15

To address currency risks, Kazakh law provides for the annual indexation of auction prices for renewable energy sources projects using a special formula promulgated by law from the second year of generation, with 70 per cent of prices based on the national currency exchange rate for convertible currencies and 30 per cent based on the consumer price index.

Waste-to-energy

Similar to renewable energy projects, reimbursement of costs for the construction and operation of new waste-to-energy plants is carried out through purchase by the FSC of electric power produced by energy-producing organisations using energy waste utilisation and

15 Winners of the auctions are included by the Ministry of Energy in its List of Renewable Energy-producing Companies upon declaration of the results of the auctions by KOREM. This list is published by the Ministry of Energy on its website.

16 In turn, the FSC as intermediary sells electricity to conventional power producers, who then supply all energy (both renewable and conventional energy) to final users. Thus, support for renewable energy in Kazakhstan is essentially carried out by smearing an expensive green tariff among consumers throughout Kazakhstan. Notably, the selling price of electric energy from a conventional power producer is the sum of the offer price of an energy-producing organisation included in the corresponding group of energy-producing organisations that sell electric energy (this offer price must not exceed the relevant maximum tariff for electric energy) and allowances to support the use of renewable energy sources determined in accordance with the legislation of Kazakhstan.

17 The maximum auction prices for subsequent auctions for renewable energy sources projects are determined based on the results of previous auctions at the maximum price of the winner.

delivered by them to the unified electric power system of Kazakhstan at a fixed auction price, which is determined based on the results of the electronic auction¹⁸ and taking into account the indexation mechanism provided for by special rules promulgated by the government. Unlike renewable energy projects, however, waste-to-energy projects shall be implemented on the basis of a 15-year and not a 20-year PPA.¹⁹ Based on the results of auctions, therefore, the FSC concludes PPAs with relevant winners of the auctions and, as a single offtaker, purchases all electric energy generated by the applicable waste-to-energy plant for 15 years from the date of commencement of comprehensive tests and the date on which the electricity produced in the course of the trials was initially supplied to the unified electric power system of Kazakhstan.

Notably, such a fixed auction price in any case cannot exceed the current statutory cap for waste-to-energy projects. The maximum auction price shall be determined using formula prescribed in legislation and is subject to approval by the Minister of Ecology, Geology and Natural Resources (the Ministry of Ecology). For instance, the current maximum auction price for electric energy produced by a waste-to-energy plant is 191.9 tenge per kWh. Fixed auction prices for waste-to-energy projects, depending on the financing structure of the project and economic feasibility, are subject to annual indexation by the FSC using the formula prescribed in legislation and taking into account the consumer price index or extraordinary indexation in the event of a significant (more than 10 per cent) change in the exchange rate of the national currency, or a combination thereof.

Notably, only energy-producing organisations included by the Ministry of Ecology on its List of Energy-producing Organisations Using Energy Waste Utilisation, and using new, previously unused technical devices and installations technologically necessary for the operation of energy waste utilisation facilities, are allowed to participate in auctions for the selection of energy waste utilisation projects. Kazakh legislation establishes certain qualification requirements for applicants to be included in this list, including, among other things, requirements for:

- a* the applicant (or any of the participants of the consortium or the partnership declared together with the applicant) to have construction experience of at least 10 objects;
- b* at least 10 years of experience in the operation of facilities for energy waste utilisation; and
- c* the proposed energy waste utilisation facilities to be equivalent to those in Directive 2010/75/EC of the European Parliament and of the Council on Industrial Emissions (Integrated Pollution Prevention and Control).

iii Non-project finance development

The largest renewable energy projects developed in Kazakhstan to date have been financed by the state-owned Development Bank of Kazakhstan and multilateral development banks such as the European Bank for Reconstruction and Development, the Asian Development Bank, the Eurasian Development Bank, the Asian Infrastructure Investment Bank, the Chinese Development Bank, and the Industrial and Commercial Bank of China. Foreign investors have also finally believed in the seriousness of the intentions of Kazakhstan's government to develop renewable energy – such as major players including Total Eren SA, SOLARNET,

18 Information on the proposed auction shall be placed by KOREM on its website together with the terms and conditions for accepting documents and registering applicants in the auction.

19 Such PPAs shall strictly follow in form and substance a template PPA for waste-to-energy projects as promulgated by law.

Hevel Group, UG Energy Ltd, Universal Energy Co Ltd, Risen Energy and other institutional investors who prioritise returns above all – and have already invested in renewable energy in Kazakhstan.

V DISTRIBUTED AND RESIDENTIAL RENEWABLE ENERGY

To date, distributed (on-site) and residential renewable energy is not widespread in Kazakhstan and thus does not play any significant role in the national economy. Still, individual consumers²⁰ are entitled to a 50 per cent rebate of the costs by the state for the purchase of installations using renewable energy produced in Kazakhstan and with a total capacity of no more than 5kW, in accordance with the procedure stipulated in legislation. It has become generally accepted that it is essential to remove the above-mentioned statutory requirement that the equipment must be local, as otherwise microgeneration as a very promising area will not be developed further in Kazakhstan.

VI RENEWABLE ENERGY SUPPLY CHAINS

It seems that it is still not clear what the major goals are for the Kazakh government in terms of renewable energy development in the country – for example, energy security as in the European Union or local industry and technology development as it was in Russia until recently. It seems, however, that the government has decided not to support local renewable energy manufacturing but to set modest renewable energy targets to be able to wait for when every source of green energy can compete on a cost basis with coal- and gas-fired power plants, and then import all renewable energy equipment needed from abroad.

VII OTHER KEY CONSIDERATIONS

i Thermal energy

Kazakh law requires that all thermal energy produced by renewable energy sources facilities and supplied to the district heating system of a locality with parameters corresponding to the parameters of the coolant in the district heating system shall be purchased by the locality's energy supply organisation. Moreover, contracts for the purchase and sale of thermal energy produced by energy-producing organisations using renewable energy sources are concluded for a period of at least the payback period of the project for the construction of an object for the use of renewable energy sources, as defined in the relevant feasibility study. An energy-producing organisation using renewable energy sources, when supplying thermal energy, is exempt from paying for the services of energy transmission organisations for the transmission of thermal energy.

The costs of thermal energy produced by such renewable energy sources facilities is included in the tariff of the energy supply organisation in accordance with the procedure established by Kazakh legislation on natural monopolies.

20 Under Kazakh law, an individual consumer is a natural or legal person who consumes electrical or thermal energy, or both, from an object for the use of renewable energy sources operating in an autonomous mode in non-electrified settlements or settlements where a centralised power supply is economically impractical, or both.

ii Flood electric energy

Each year, about 300 million kilowatts per hour are produced in Kazakhstan during the spring flood. This is flood electric energy – that is, electric energy generated by energy-producing organisations (hydroelectric power plants) during environmental releases of water in accordance with the water legislation of Kazakhstan. Such energy-producing organisations are required by law to sell all generated flood electric energy to the FSC at the maximum tariff for electric energy in accordance with the procedure established by the Law on RES. Further, the FSC directs this inexpensive electricity to reduce the cost of the tariff to support energy from renewable energy sources.

VIII CONCLUSIONS AND OUTLOOK

There are high hopes that, because of the January Tragedy, the government is finally ready to carry out the long-overdue political and economic reforms needed. Nonetheless, Kazakhstan must find its own way through the energy transition period as the rapid development of renewable energy sources in Kazakhstan has exposed many problems in the power industry, including lack of manoeuvring capacity. It remains to be seen which areas of the power industry (i.e., renewable energy, gas or nuclear) the country will prioritise in the future. In any case, Kazakhstan shall at least move first from coal to natural gas or nuclear energy to reduce emissions from coal as well as to provide the population and industry with the energy they need in the most cost-effective way. As such, during the recent 34th plenary session of the Foreign Investors Council of Kazakhstan, President Kassym-Jomart Tokayev noted in his speech the growing potential for the development of renewable and alternative energy, and underscored the key role of the gas industry in reducing the use of coal.

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