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INVESTOR'S GUIDE TO RENEWABLE ENERGY PROJECTS IN KAZAKHSTAN

USAID POWER THE FUTURE REGIONAL PROGRAM

Nur-Sultan 2020

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INTRODUCTION

The *Investor's Guide to Renewable Energy Projects in Kazakhstan* was developed at the request of the Ministry of Energy of the Republic of Kazakhstan with funding from the U.S. Agency for International Development's (USAID) Power the Future Regional Program, implemented by Tetra Tech.

It presents step-by-step guidance for investors planning to develop renewable energy (RE) projects in Kazakhstan and includes information on state support for the development of RE projects and auction rules, as well as an overview of the main regulations governing the preparation, coordination, approval and implementation of RE projects.

This guide was developed based on the regulations of the Republic of Kazakhstan effective as of June 2020, which can be found in official information and legal databases at: <http://adilet.zan.kz/>, <https://prg.kz/>, <http://online.zakon.kz/>.

The USAID Power the Future Regional Program appreciates the valuable information and insights that Kazakhstan's Ministry of Energy, Financial Settlement Center for the Support of Renewable Energy Sources LLP, the Operator of the Electric Energy and Capacity Market (KOREM) JSC, and the Electricity Grid Operating Company (KEGOC) JSC provided to inform the preparation of this Guide.

The USAID Power the Future Regional Program was launched to support the accelerated transition of the five Central Asian countries to a cost-effective, low-carbon and sustainable economy by expanding the use of renewable energy sources and increasing energy efficiency. It aims to accelerate the development of renewable energy in the region by helping its states improve regulatory conditions and create an effective enabling environment for private investments in the RE sector.

ACRONYMS

ACEMS	Automated commercial energy metering system
ACS	Automated control system
APS	Architectural planning specifications
BioPP	Bio power plant
CIW	Construction and installation works
CoAO	The Code of the Republic of Kazakhstan on Administrative Offenses
D&S	Design and survey
DED	Design and estimate documentation
EDS	Electronic digital signature
EIA	Environmental Impact Assessment
FS	Feasibility Study
FSC	Financial Settlement Center for the Support of Renewable Energy Sources LLP
Gcal/hr	Gigacalories per hour
HPP	Hydro power plant
Law On the Support Of RES	Law of the Republic of Kazakhstan “On Support of the Use of RES”
LC RK	Land Code of the Republic of Kazakhstan
LEA	Local executive authorities
MCI	Monthly calculation index
MIA RK	Ministry of Internal Affairs of the Republic of Kazakhstan
MID RK	Ministry of Investment and Development of the Republic of Kazakhstan
MoE RK	Ministry of Energy of the Republic of Kazakhstan
MW	Megawatt
NDC SO	National Dispatch Center of the System Operator
PSC	Public service center
RDC	Regional dispatching center
REGI	Renewable energy generating installations
RES	Renewable energy sources
SPP	Solar power plant
SPZ	Sanitary protection zone
TS	Technical specifications
UPS	Unified power system
WPP	Wind power plant

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I. RENEWABLE ENERGY DEVELOPMENT IN THE REPUBLIC OF KAZAKHSTAN

1.1 Strategy and RE Development Target Indicators

In 2012, the Government of the Republic of Kazakhstan adopted the Kazakhstan 2050 Strategy, which specifies the directions for long-term economic development in the country.

In May 2013, the Concept for the Republic of Kazakhstan's Transition to a Green Economy (Green Economy Concept) was adopted with the ambitious goal of a 2050 generation mix comprising 50% alternative energy sources, including gas, nuclear and renewable energy. The government plans to achieve this through a gradual decommissioning of aging infrastructure, broader use of alternative fuels, installation of energy-efficient equipment, and compliance with strict environmental standards.

The Green Economy Concept sets renewable energy sector development targets in Kazakhstan:

- ✓ A 3% share of RE in total electricity production by 2020
- ✓ A 10% share of RE in total electricity production by 2030
- ✓ A 50% share of low-carbon alternative and renewable energy sources (RES) by 2050.

The 2025 Republic of Kazakhstan Strategic Development Plan, approved by Decree of the President of the Republic of Kazakhstan No. 636, dated February 15, 2018, sets a target of a 6% share of renewable energy in total electricity production by 2025.

The Order of the Minister of Energy of the Republic of Kazakhstan No. 478 dated November 7, 2016, sets a target for RE sector development by 2020, with the overall goal of increasing the total installed capacity of RE facilities to 1,700 MW by 2020 (3%).

Table 1. Kazakhstan's Renewable Energy Sector Development Targets

No.	Indicator	Target
1	Share of electric energy produced by renewable energy facilities in the total volume of 2020 electricity production	3%
2	Total installed capacity of renewable energy facilities by 2020, including:	1700 MW
	1) Wind power plants	933 MW
	2) Solar power plants, using solar PV energy converters	467 MW
	3) Hydro power plants	290 MW
	4) Biogas power plants	10 MW

To successfully develop Kazakhstan's RE sector and taking into account international best practice, amendments and additions were introduced to the Republic of Kazakhstan Law on Support for the Use of RES in 2013. Thus, in accordance with the Law on Making Amendments and Addenda to Certain Legislative Acts of the Republic of Kazakhstan on Supporting the Use of RES No. 128-V dated July 4, 2013, the FSC carries out centralized purchase and sale of electric energy produced by RE facilities and supplied to the Kazakhstan unified power system in accordance with the procedure provided for in the Law on the Support of RES. Later, the Decree of the Government of the Republic of Kazakhstan No. 1281 dated November 29, 2013, appointed the FSC as the financial settlement center for the support of RE sources.

The Resolution of the Government of the Republic of Kazakhstan No. 645 dated June 12, 2014 established feed-in tariffs for a period of 15 years. In July 2017, the Law on Support for the Use of RES was amended, introducing a mechanism for RE auctions. The ceiling auction prices were set at the feed-in tariff level.

1.2 RE Definition. RE Resource Potential

According to Article 1 of the Law of the Republic of Kazakhstan on Support for the Use of RES, renewable energy sources are those that are continually replenished due to natural processes, including the energy of sunlight, wind energy, hydrodynamic energy of water, geothermal energy (heat of the ground, ground water, rivers, and basins), and anthropogenic

sources of primary energy (biomass, biogas and other fuels derived from organic waste) used for the production of electric and/or thermal energy.

RE Resource Potential in Kazakhstan

- ✓ Wind: 920 billion kWh/year
- ✓ Hydro: 62 billion kWh/year
- ✓ Solar: 2.5 billion kWh/year
- ✓ Geothermal: 4.3 GW¹

As part of the project of Ministry of Energy of the Republic of Kazakhstan (MoE RK), the United Nations Development Program (UNDP), and Global Environment Fund "Kazakhstan Wind Energy Market Development Initiative", the wind potential at various sites across the country was studied in accordance with the methodology for estimation of wind potential, in particular annual dynamics of wind characteristics was determined for 15 sites. Based on this work, a *Wind Atlas of Kazakhstan* and pre-investment studies for these sites were developed.²

A solar atlas of Kazakhstan was developed in 2017 as part of the project of the MoE RK and UNDP "Providing Assistance to the Government of the Republic of Kazakhstan to Implement the Concept on the Transition to Green Economy and Institutionalize the Green Bridge Partnership Program".

The U.S. National Renewable Energy Laboratory and USAID jointly developed a RE Explore³, which provides data on RE resources, analytical tools and technical

¹ Decree No. 724 of the Government of the Republic of Kazakhstan dated June 28, 2014, On Approving the Concept of Development of the Fuel and Energy Complex of the Republic of Kazakhstan through 2030 and the

website of the Ministry of Energy: <http://energo.gov.kz/>

² <http://energo.gov.kz/index.php?id=2962>

³ <https://rfc.kegoc.kz/ru/resources/reexplorer>

support for investors, and allows the visual analysis of RE potential based on user-specified scenarios.

Wind Energy

Wind energy has the greatest potential among all RES in Kazakhstan. Around half of its territory has an average wind speed of about 4 to 5 m/sec at a height of 30m. The greatest wind potentials are in the Atyrau and Mangystau regions in the Caspian Sea area, and northern and southern Kazakhstan. According to the Republic of Kazakhstan 2030 Concept of the Fuel and Energy Complex Development, the country's wind potential is 1,820 billion kWh per year.

Hydro Energy

Hydropower is the second-largest RES in Kazakhstan. As of 2017, it accounts for about 10.9% of the country's generating capacity.⁴ Ranking third among CIS (Commonwealth of Independent States) countries in water resource potential, Kazakhstan has an estimated potential of 170 billion kWh per year, of which about 62 billion kWh are technically feasible. The annual hydropower potential of medium and large rivers is 55 billion kWh, and 7.6 billion kWh from small rivers.⁵ About 8 billion kWh from small hydropower plants are estimated to be technically feasible.

Hydro energy resources are distributed throughout the country, but three areas have particularly large resources: the Irtys River basin and its main tributaries (Bukhtarma, Uba, Ulba, Kurchum, Kardzhil), the southeast zone with the Ili river basin, and the south zone with the Syrdarya, Talas and Chu river basins.

As of 2017, electricity generation from small hydropower plants (HPPs) was 649 million kWh.⁶

Solar Energy

Solar energy has an enormous potential in Kazakhstan. According to the Concept of the Fuel and Energy Complex Development, solar energy can produce about 2.5 billion kWh per year, with 2,200-3,000 hours of solar per year (2,500-3,000 hours per year in the southern regions) out of 8760 hours.

Geothermal Energy

Kazakhstan is also potentially rich in geothermal resources. Its hydrogeothermal resources with temperatures of 40°C to more than 100°C are estimated at 10,275 billion m³ by water rate and 680 billion Gcal by heat rate, which is equivalent to 97 billion toe (ton of oil equivalent) or 2.8 billion TJ, equivalent to the country's estimated fossil fuel reserves. Kazakhstan has estimated hydrocarbon reserves of 12 billion tons of oil and condensate (17.2 billion toe) and about 6-8 trillion cubic meters of gas

(7-9.2 billion toe). Its coal reserves are estimated at 150 billion tons (101.0 billion toe).

Geothermal sources are located primarily in western Kazakhstan (75.9%), southern Kazakhstan (15.6%) and central Kazakhstan (5.3%). The most promising sources are the Arys, Almaty and Zharkent basins in southern and southeastern Kazakhstan with thermal underground waters with mineralization of up to 3 g/dm³ and temperatures up to 70-100°C.⁷

Biogas Energy

Kazakhstan is a major producer of grain and other agricultural products, which produce a significant amount of waste from crops and manure. The largest volumes of mixed agricultural wastes are available in the Almaty, East Kazakhstan, Zhambyl, Kostanay, Akmola and Karaganda regions. Livestock waste is a stable source of biomass for energy production. Household solid waste is another source.

No data are yet available on total and available volumes of waste and their geographic locations. Waste and residues are rarely used efficiently, for example, as raw materials for bioenergy projects. Currently, the European Bank for Reconstruction and Development is implementing a project to assess the potential for biofuel production in Kazakhstan.

Current RE Sector Statistics

As of the end of June 2020, there are 101 RE facilities in Kazakhstan, including:

- ✓ Wind Power Plants (WPPs) – 22
- ✓ Solar Power Plants (SPPs) – 37
- ✓ Small Hydropower Plants (HPPs) – 37
- ✓ Biogas Power Plants (BioPPs) - 5

The total installed capacity as of the 1st quarter of 2020 is 1414 MW, including:

- ✓ WPPs – 383.9 MW
- ✓ Small HPPs – 224.6 MW
- ✓ SPPs – 797.6 MW
- ✓ BioPPS – 7.82 MW

Generation of electricity by RE facilities in 2019 – 2400.74 mln. kWh:

- ✓ WPPs – 717.4 mln. kWh
- ✓ Small HPPs - 1105.3 mln. kWh
- ✓ SPPs - 563.14 mln. kWh
- ✓ BioPPs – 14.9 mln. kWh

⁴ <http://www.kegoc.kz/ru/o-kompanii/nacionalnaya-energosiistema>.

⁵ The 2030 Concept of the Fuel and Energy Complex Development.

⁶ <http://energo.gov.kz/index.php?id=17615>.

⁷ <http://energo.gov.kz/index.php?id=2962>.

The largest RE projects are:

- ✓ WPP, Tsatek Green Energy: 50 MW
- ✓ SPP, Baikonur Solar: 50 MW
- ✓ SPP, Saran: 100 MW
- ✓ SPP, ENEVERSE KUNKUAT: 100 MW
- ✓ SPP, M-KAT GREEN: 100 MW
- ✓ SPP, KB ENTERPRISES: 100 MW

The FSC website has an interactive map of RE facilities.⁸

1.3 State Support for Investments in RE Sector Development

The Republic of Kazakhstan's Law on Support for the Use of RES includes the following investment support measures:

- ✓ The FSC created under the Kazakhstan Electricity Grid Operating Company JSC (KEGOC) as a single buyer of RE.
- ✓ 15-year power purchase agreements at auction prices with the FSC for all RE.
- ✓ Annual indexation of auction prices, beginning in the second year of generation, with 70% based on the national currency exchange rate to convertible currencies and 30% based on the consumer price index.
- ✓ RE generators are exempt from payment for electricity transmission services.
- ✓ Financial settlement of imbalances due to RES is carried out by the FSC.
- ✓ Priority dispatch for RE generators.
- ✓ The transmission company has no right to refuse to connect the RE facility due to lack of network availability.
- ✓ The transmission company bears the expenses for the network's reconstruction and expansion.
- ✓ Land plots and connection points are reserved for RE auctions.
- ✓ Legislation identifies investment preferences.

1.4 Government Investment Preferences

State support for investments is regulated by the Ministry of Foreign Affairs of the Republic of Kazakhstan (MFA RK). State support aims to create a favorable economic climate, boost investment in new production facilities, expand and renovate production facilities, increase the use of modern technologies, and upgrade skills. State investment support includes the provision of investment preferences (incentives).

This includes targeted benefits for legal entities that implement investment projects and for companies that import equipment via financial leasing agreements for these legal entities.

Categories of Investment Projects

The Republic of Kazakhstan Entrepreneurial Code states preferences for:

- ✓ Investment projects
- ✓ Priority investment projects
- ✓ Special investment projects

Investment project is a set of actions that implies investing in new production facilities, and the expansion and/or the renovation of existing production facilities including those that were established, expanded and/or renovated within a public private partnership project, including concession projects.

Priority investment project means an investment project for:

- ✓ Development of new production facilities implying a legal entity's investment in the construction of new production facilities (factory, plant or workshop) in the amount of at least 2 million monthly calculation indices, established by the Law on the republican budget and effective on the date of filing an application for investment preferences.
- ✓ Expansion and/or renovation of existing production facilities, implying a legal entity's investment to modify basic assets, including renovation (renovation, reconstruction and modernization) of existing production facilities that manufacture goods, in an amount not less than 5 million monthly calculation indices, established by the Law on the republican budget and effective on the day of filing an application for investment preferences.

A priority investment project aimed at creating new, or expanding and/or renovating existing production facilities is implemented by a legal entity operating in one of the priority business activities included on the priority business activities list defined by the government.

Special investment project is an investment project that has been implemented and/or is being implemented by a legal entity of the Republic of Kazakhstan registered as a member of a special economic zone or the owner of an available warehouse in accordance with Kazakhstan's customs laws, or a project implemented by a legal entity of Kazakhstan under the agreement on industrial assembly of motor vehicles.

⁸ <https://rfc.kegoc.kz/ru/resources/interactivemap>.

Types of Investment Preferences

Article 283 of the Entrepreneurial Code provides for the following types of investment preferences.

For investment projects (including priority investment projects):

- ✓ Exemption from customs duties and value-added tax (VAT) for imports
- ✓ State in-kind grants for up to 30% of the investment in fixed assets (land plots, buildings, structures, machinery and equipment, computers, measuring and control instruments and devices, vehicles (except for motor vehicles), production and household equipment)

For priority investment projects:

- ✓ Tax preferences:
 - *Construction of new industries:*
 - Corporate income tax
 - Land tax
 - Property tax
 - *Expansion or updating of existing production:*
 - Corporate income tax
- ✓ Exemption from customs duties
- ✓ State in-kind grants

For special investment projects:

- ✓ Tax exemptions from income tax, land tax, property tax

Investors must specify a comprehensive list of imported equipment in investment projects.

Detailed information about these investment preferences is available on the KAZAKH INVEST website,⁹ the body responsible for implementation of the state support measures of industrial and innovative activities to promote investments into the economy of the Republic of Kazakhstan.

Per Resolution of the Government of the Republic of Kazakhstan No. 13 dated January 14, 2016, electricity and gaseous fuel production is included in the List of priority activities for investment and priority investment projects implementation.

Hence, RE projects fall under the category of investment and priority investment projects.

When concluding an investment contract for an investment project, investors are granted the following investment preferences:

- ✓ Exemption from customs duties:
 - Applies to the import of technological equipment and its components for the

duration of the investment contract, but not more than 5 years from the date of registration of the investment contract

- Applies to the import of spare parts for technological equipment, inputs and materials for a period of up to 5 years, depending on the volume of investment in fixed assets and whether the investment project falls under the list of priority activities
- ✓ Exemption from VAT for imports, provided that:
 - Inputs and materials are included in the Order of the Minister for Investments and Development No.140, dated February 27, 2018, imports of inputs and materials are documented in accordance with the customs legislation of the Eurasian Economic Union and/or customs legislation of the Republic of Kazakhstan; imported inputs and/or materials will be used only for the implementation of activities under the investment contract.
- ✓ State in-kind grants (land plots, buildings, structures, machinery and equipment, computers, measuring and control instruments and devices, vehicles) provided that: the maximum value of any state in-kind grant does not exceed 30% of the volume of investments into fixed assets; a document confirming the preliminary consent of the local executive authorities of the Republic of Kazakhstan (LEA RK) shall be submitted.

When concluding an investment contract for a priority investment project investors are granted the following investment preferences:

- ✓ *exemption from customs duties:*
 - *when importing technological equipment and its components - for the duration of the investment contract, but not more than for 5 years from the date of registration of the investment contract;*
 - *when importing spare parts for technological equipment, raw materials and supplies for a period of up to 5 years, depending on the volume of investments in fixed assets and on whether the investment project corresponds to the list of priority types of activities;*
- ✓ *national in-kind grants (land plots, buildings, structures, machinery and equipment, computational equipment, measuring and control devices, vehicles) under the following conditions: the amount of the in-kind grant must not exceed 30% of the volume of investments in fixed assets; it is necessary to provide a document confirming the prior consent of the local executive authority (hereinafter - LEA).*

⁹ http://invest.gov.kz/ru/guide/child/investment_preferences

✓ tax benefits:

- the following tax preferences are provided for the creation of new production facilities - a factory, a plant, a workshop:
 - Exemption from the corporate income tax for a period of 10 years. At the same time, the period for granting the tax benefit starts from January 1 of the year in which the investment contract is concluded and ends no later than in ten consecutive years, which are calculated starting from January 1 of the year following the year in which the investment contract for the implementation of the priority investment project was concluded.
 - Exemption from the land tax for a period of 10 years. At the same time, the period for granting the tax benefit begins on the 1st day of the month in which the investment contract is concluded and ends no later than in ten consecutive years, which are calculated starting from January 1 of the year following the year in which the investment contract was concluded. The provisions of the first part of this clause do not apply in cases where the land plot used for the implementation of a priority investment project, or a part of it (with or without buildings, structures, facilities located on it) is leased or handed over to be used on other grounds.
 - Exemption from the property tax for a period of 8 years. At the same time, the calculation at a rate of 0 to the tax base starts from the 1st day of the month in which the first asset is accounted for in fixed assets in accordance with international financial reporting standards and the requirements of the legislation of the Republic of Kazakhstan on accounting and financial reporting; and ends no later than in eight consecutive years, which are calculated starting from January 1 of the year following the year in which the first asset is accounted for in fixed assets in accordance with international financial reporting standards and the requirements of the legislation of the Republic of Kazakhstan on accounting and financial reporting.
- Expansion or modernization of ongoing production
 - Exemption from the corporate income tax for a period of 3 years. At the same time, the period for granting the tax benefit begins on January 1 of the year following the year in which the last fixed asset producing outputs was commissioned under the investment contract and ends no later than in three consecutive years, which are calculated starting

from January 1 of the year following the year in which the last fixed asset producing outputs was commissioned under the investment contract.

To be eligible for investment preferences, a legal entity of the Republic of Kazakhstan uses a standard form to submit an application for investment preferences to the Investment Committee of the Ministry of Foreign Affairs of RK (IC MFA RK) along with documents confirming the applicant's compliance with the requirements of the Entrepreneurial Code. At the same time, from March 1, 2020, the IC MFA RK accepts applications for investment preferences in electronic form through PSCs or on the website e-license.kz, attachments to the application must be scanned and attached.

The investment preferences are granted on the basis of an investment contract concluded between the authorized investment body and a legal entity of the Republic of Kazakhstan implementing the investment project.

In order to be eligible for the investment preferences, a legal entity of the Republic of Kazakhstan shall submit an application for investment preferences to the Investments Committee of the Ministry of Investments and the following documents:

- ✓ Certificate of state registration (re-registration) of a legal entity
- ✓ Copy of the charter of the legal entity, certified by the signature of the CEO and the seal of the legal entity (if any)
- ✓ Business plan for the investment project
- ✓ documents confirming the size (cost) of the national in-kind grant requested by the applying legal entity of the Republic of Kazakhstan and preliminary approval of its provision;
- ✓ if the application for the provision of investment preferences provides for the provision of tax preferences, the investor submits the conclusion of a comprehensive non-departmental examination of construction projects, certified by the signature of the CEO, in the manner determined by the legislation of the Republic of Kazakhstan.

A standard application form for investment preferences and the requirements for preparing the business plan were approved by the Order of the Minister for Investments and Development No. 1133 dated November 30, 2015, On Certain Issues of State Support for Investments.

From the day a decision is made to provide investment preferences, the MID RK prepares an investment contract for signature, using the standard form contract approved by the government ([Annex 1](#)).



2. AUCTIONS

2.1 General Provisions

The RE auction mechanism was introduced by the Law of the Republic of Kazakhstan No. 89- VI LRK dated November 07, 2017 "On Amendments and Additions to Certain Legislative Acts of the Republic of Kazakhstan on Electric Power Industry", along with the auction requirements introduced to the Law of the Republic of Kazakhstan on Support of the Use of RES.

The main *purpose of the auction mechanism* is to select the lowest-cost RE projects and to establish competitive market prices for renewable energy.

Auctions are a process organized and conducted by the auction organizer (organizer) using an electronic platform. Auctions are intended to select projects to be constructed and determine auction prices for electricity from renewable energy sources, taking into account the renewable energy facilities siting plan.

The auction system is intended to support the development of RES in Kazakhstan by:

- ✓ Achieving the RES development targets
- ✓ Reducing the influence of the RES sector on increases in the end-user tariffs
- ✓ Ensuring the orderly development of the RES sector, considering the capabilities of the unified power system of the Republic of Kazakhstan
- ✓ Ensuring a transparent procedure for the selection of renewable energy projects

The Rules of Organizing and Holding Auctions, Including Qualification Requirements for Auction Participants, the Content and Procedure for Submitting Applications, Types of Financial Guarantee for Participation in Auctions and Conditions of their Deposit and Return, the Procedure for Summing Up the Results and Determining the Winners were approved by the Order of the Minister of Energy of the Republic of Kazakhstan No. 466 dated December 21, 2017¹⁰.

¹⁰ This section is written taking into account changes to the Rules of Organizing and Holding Auctions made by the Order of

the Ministry of Economy of the Republic of Kazakhstan No. 228 dated 27.06.2019

In accordance with the Order of the Minister of Energy of the Republic of Kazakhstan No. 280 dated August 7, 2017, the Kazakhstan Electricity and Power Market Operator JSC (KOREM) was named the organizer. The RE auctions will be conducted on KOREM's electronic trading platform, <http://www.korem.kz/>.

The *Methodological Guidelines for RE Auctions* were developed by KOREM and approved by Order No. P-12 dated April 11, 2018. These guidelines specify all details regarding stages, conditions and procedures for auctions.

According to the auction schedule approved by the MoE RK, international auctions for 250 MW of installed RE capacity are planned for 2020.

Key Features of Kazakhstan's Auction Mechanism

- ✓ Auctions are held in accordance with the auction schedule approved by the MoE RK.
- ✓ Auctions are held by zones: Northern, Western and Southern.
- ✓ Auctions are held separately for different types of RE, taking into account technical connection limitations.
- ✓ there are two types of auctions which are held separately – auctions with documentation and auctions without documentation.
- ✓ Auctions are divided into two types depending on the amount of installed capacity: small - up to and including 10 MW and large - over 10 MW.
- ✓ Auctions take the form of a unilateral online auction.
- ✓ Auction ceiling prices are set by the MoE RK. For the 2020 auctions, auction ceiling prices are set at the level of maximum auction prices by types of RE determined as a result of 2019 auctions.
- ✓ The primary eligibility criterion is the availability of a financial guarantee in the form of a bank guarantee or a standby letter of credit issued with the SWIFT system.
- ✓ The primary selection criterion is the lowest price.
- ✓ The primary criteria for recognizing auctions as valid are: (a) at least 2 participants in the auction and (b) the total amount of bids should be more
- ✓

than 130% of the declared capacity. The parameters set by point (b) of this paragraph do not apply to the auctions for the selection of BioPPs and HPPs.

- ✓ Auction winners that conclude a power purchase agreement (PPA) shall use only new generating equipment (not previously in operation) to construct the RE facility.

A more detailed description of the procedure and the conditions for RE auctions is provided below.

2.2 Auction Schedule

The auction schedule is developed and published on the MoE RK website no less than three months prior to the proposed auction date.

The schedule contains information on the land plots allocated for the construction of a RE facility and grid connection points of energy transmission organizations, indicating the maximum permissible capacity and the number of possible connections.

The land plots specified in the schedule are reserved by the local executive authorities of the regions, cities of republican significance, and the capital, until the auction winners are granted rights to the land plot. The relevant information shall be sent to the MoE RK.

The grid connection points provided by the energy transmission organizations to the MoE RK and specified in the Schedule are reserved until the auction winners conclude an agreement on RE facility connection and/or the technical specifications for grid connection are issued. The relevant information shall be sent to the MoE RK.

The 2020 auction schedule was approved by the Order of the Minister of Energy of the Republic of Kazakhstan No. 202 dated May 21, 2020 and published on the MoE RK website in accordance with the form provided in [Annex 2](#). The Schedule is not subject to amendment.

The total amount of installed capacity to be auctioned in 2020 is 250 MW:

- ✓ SPPs: 55 MW
- ✓ WPPs: 65 MW
- ✓ HPPs: 120 MW
- ✓ BioPPs: 10 MW

Table 2. The schedule of the renewable energy auctions for 2020

RES type	HPP	SPP	WPP	BioPP	WPP	HPP	SPP	SPP
Auction date	9.11. 2020	10.11.2020	11.11.2020	23.11.2020	24.11.2020	25.11.2020	8.12.2020	10.12.2020
Auctioned capacity, MW	20	15	15	10	50	100	20	20
Ceiling auction price, KZT/kWh	15.48	16.97	21.69	32.15	21.69	15.48	16.97	16.97
Project size	small	small	small	small	large	large	large	large
Auction type	w/o documentation	w/o documentation	w/o documentation	w/o documentation	w/o documentation	w/o documentation	with documentation	with documentation
UPS Zone	North South	North South	North South	All zones	North South	North South	South	South
Land	-	-	-	-	-	-	+	+
Connection point	-	-	-	-	-	-	+	+

The schedule provides for separate auctions for the selection of small and large renewable energy projects. There will be 6 auctions without documentation and 2 with documentation in 2020 for the purposes of auctions: SPPs, BioPPs, HPPs from 0.1 to 10 MW inclusive, and WPPs from 0.75 to 10 MW inclusive will be eligible for small projects auctions; SPPs, BioPPs, HPPs, WPPs with an installed capacity above 10 MW will be eligible for large project auctions. At the same time the maximum capacity of a project shall not exceed the installed capacity specified in the auctions schedule.

Auctions are held in the following zones: the northern zone (Akmola, Aktobe, East Kazakhstan, Karaganda, Kostanay, Pavlodar, and North-Kazakhstan regions), southern zone (Almaty, Zhambyl, Kyzylorda, and South-Kazakhstan regions), and western zone (Atyrau, Western Kazakhstan, and Mangystau regions).

Results of the 2018 Auctions

According to the auction schedule approved by the authorized body, in 2018 1,000 MW of installed capacity of renewable energy facilities were auctioned to investors, including :

- ✓ WPPs – 620 MW

- ✓ SPPs – 290 MW
- ✓ HPPs – 75 MW
- ✓ BioPP – 15 MW

The 2018 auctions were divided into spring (from May 23, 2018 to July 5, 2018) and fall (from October 3, 2018 to October 18, 2018).

In the course of the auction, 36 RES projects with a total installed capacity of 857.93 MW were selected, of which

- ✓ WPPS – 500.85 MW
- ✓ SPPs – 270 MW
- ✓ Small HPPs – 82.08 MW
- ✓ BioPPs – 5 MW

113 Kazakhstani and foreign companies from nine countries took part in the auction: Kazakhstan, Russia, China, Turkey, France, Bulgaria, UAE, Italy, the Netherlands.

The total volume of bids submitted by the bidders amounted to 3,422 MW, the volume of demand exceeded the volume of supply by 3.4 times. The winners of the auction won projects for 85% of the auctioned capacity. According to Table 2, the bidders

showed interest in the proposed projects for all types of renewable energy sources. For BioPP, HPP and WPP projects the volume of demand exceeded the volume of supply by about two times. The bidders expressed the greatest interest in SPP projects, where the volume of demand exceeded the volume of supply by seven times.

As a result of the auction, the maximum reduction in the auction price was achieved:

- ✓ for wind generation - 23.3% (starting ceiling auction price - 22.68 KZT/kWh),

- ✓ for solar generation - 48% (starting ceiling auction price - 34.61 KZT/kWh),
- ✓ for small hydropower plants - 23.4% (starting ceiling auction price - 16.71 KZT/kWh),
- ✓ for BioPPs - 1% (starting ceiling auction price - 32.23 KZT/kWh).

This is a good result, confirming that the auctions help to determine the market prices for electricity generated by renewable energy facilities.

Table 3. Results of the 2018 Auctions for the selection of renewable energy projects

Technology	Auctioned installed capacity, MW	Bids of the bidders, MW	Selected during the auction, MW	The number of the bids received	The number of the selected projects	Starting auction price, KZT/kWh	Average auction price, KZT/kWh	Minimum auction price, KZT/kWh
Wind	620	1235.85	500.85	30	16	22.68	19.92	17.39
Solar	290	2023.10	270	75	12	34.61	22.25	18
Small HPP	75	152.50	82.08	13	7	16.71	14.68	12.80
BioPP	15	10.90	5	3	1	32.23	32.15	32.15
TOTAL:	1,000	3,422	857.93	121	36	-	-	-

The results of the 2019 auctions.

According to the Schedule for 2019 approved by the Ministry of Energy of the Republic of Kazakhstan, the total of 255 MW of installed capacity was announced to be auctioned, broken down by types of power plants:

- ✓ WPP – 100 MW;
- ✓ SPP – 80 MW;
- ✓ HPP – 65 MW;
- ✓ BioPP - 10 MW.

In total, 8 auctions were planned and held (4 - for small, 4 - for large renewable energy projects), of which 7 auctions - without documentation and 1 auction - with documentation. In accordance with the Rules for Determining Feed-In Tariffs and Ceiling Auction Prices, the ceiling prices for 2019 auctions were determined at the level of the maximum price of the winners of the 2018 auctions. Therefore, the maximum starting prices for the 2019 auctions were set at the following level (excluding VAT):

- WPP – 22.66 KZT/kWh;
- SPP - 29 KZT/kWh;
- HPP – 15.48 KZT/kWh;
- BioPP – 32.15 KZT/kWh.

In general, at the 2019 auctions 13 renewable energy projects with a total installed capacity of 212.89 MW were selected, of which WPP - 108.99 MW, SPP - 86.5 MW, HPP - 7 MW and BioPP - 10.4 MW. In total, 32 Kazakhstani and foreign companies from 8 countries took part: Kazakhstan, Russia, China, Germany, Malaysia, Italy, Spain, the Netherlands.

According to the data in Table 3, the total volume of bids received from the auction participants amounted to 818.99 MW, i.e. the volume of demand exceeded the volume of supply by 3.2 times. The winners of the auctions selected 83% of the auctioned installed capacity. Auction participants demonstrated great interest in projects of all offered RES types. In particular, for WPP projects, the volume of demand exceeded the supply volume by 2.8 times, but the

greatest interest from investors was in the implementation of SPP projects, for which the volume of demand exceeded the supply volume by 6.5 times. As a result of the auction, the maximum decrease in

the auction price was: for WPP projects - 15%, for SPP projects - 66%, for HPP projects - 0.3% and BioPP - 0.1%

Table 4. Results of the 2019 Auctions for the selection of renewable energy projects

Technology	Auctioned installed capacity (MW)	Bids of the bidders (MW)	Selected during the auction, MW	The number of the selected projects	Starting auction price, KZT/kWh	Average auction price, KZT/kWh	Minimum auction price, KZT/kWh
Wind	100	278.99	108.99	5	22.66	19.76	19.27
Solar	80	522.6	86.5	3	29	13.52	9.9
Small HPP	65	7	7	2	15.48	15.46	15.43
BioPP	10	10.4	10.4	3	32.15	32.14	32.13
TOTAL:	255	818.99	212.89	13	-	-	-

2.3 Preparation for Participation in Auctions

Document Submission, Applicant Registration and Obtaining Auction Participant Status

To participate in the RE auction and to get the auction participant status, the applicant shall register in the Organizer's trading system and conclude an Agreement for the provision of the service for organization and holding of the auctions (The Auction Services Agreement), and pay for the services of the Organizer.

Acceptance of documents and registration of auction applicants is done by the Organizer within the timeframe specified in the 2020 Auctions Schedule. To be registered in the trading system database the applicant shall apply for online registration on KOREM's official Internet resource <http://vie-trade.korem.kz/ru/user/login> and submit the following documents to the Organizer in electronic form:

1. A copy of the charter
2. A copy of the certificate of state registration/re-registration of a legal entity
3. A copy of the decision of the relevant body of the legal entity on the appointment of the CEO
4. Power of attorney for a designated representative (if the representative is someone other than the CEO)
5. Details on the legal entity (email, contact numbers, bank details)
6. Document confirming the submission of the financial guarantee for participation in the auction
7. A copy of technical specifications for connection to the grid, issued and agreed in accordance with the

Grid Code or an indication of the grid connection point in accordance with the Schedule;

8. Copies of title documents for the land plot in accordance with the Land Code of the Republic of Kazakhstan dated June 20, 2003, or an indication of the land plot in accordance with the Schedule;
9. A copy of the letter of approval by the System Operator of the "Power Distribution Scheme" with the declared electrical capacity of 5 MW or more developed in accordance with the Grid Code or an indication of the grid connection point in accordance with the schedule;
10. Letter confirming that the Participant familiarized himself with the documentation published on the Organizer's web site for those participants that take part in the auction with documentation.

The documents referred to in paragraphs 7, 8 and 9 shall be provided by the Applicants for participation in the auctions without documentation, who plan to participate in the auction with their own land plots and grid connection points.

The document specified in paragraph 10 is provided by the Applicants planning to participate in the auctions with documentation.

Foreign legal entities shall provide the equivalent documents *in accordance with the laws of the country where they are registered* with notarized translations of each document into the Kazakh or Russian languages.

If any of these documents are later amended, the applicant should notify the organizer in writing of any changes.

After receipt and verification of the documents, the Auction Organizer shall review the submitted

documents within 2 (two) business days from the date of the application submission via Organizer's Internet resource. The applicant is granted the status of a participant after online registration, signing the Auction Services Agreement with the Auction Organizer and payment for such services.

The organizer will stop accepting documents and changes in user accounts 5 (five) business days before the auction date according to the auction schedule.

The applicant shall notify the organizer of any changes in corporate details and/or the list of employees who have access to the trading system a minimum of 5 (five) business days before the date of the auction in which the applicant plans to participate.

Auction Services Agreement

Once registration is confirmed, the organizer will send the draft auction services agreement to the applicant for signature by email, along with an invoice for an auction services fee. The applicant reviews the agreement and returns a signed copy to the organizer by fax or email no less than 1 (one) business day before the auction date, and the original agreement in duplicate by mail.

Auction services are refundable and paid based on the auction services agreement. The organizer's service fee is defined by law and amounts to KZT 399,895. The applicant must pay the fee by 6:00 p.m. Astana time 1 (one) day before the auction. After receiving the signed agreement and payment, the organizer will confirm the applicant's participant status, notify the applicant by email, and provide the participant with access to the online trading system.

According to the agreement, the auction organizer shall:

- ✓ Ensure the functioning of the auction trading system
- ✓ Develop and approve methodological instructions and regulations for conducting the auction
- ✓ Ensure conditions for equal access to the auction for all participants
- ✓ Brief participants' employees on how to operate the trading system
- ✓ Interact with the authorized body and FSC on issues related to the organization and conduct of the auction
- ✓ Publish the register of auction winners on the official Internet resource

The applicant can participate in several auctions under one auction services agreement, provided that the service fee is paid separately for each auction.

The organizer shall send to the applicant an invoice, an act of acceptance of the executed services and an act

of reconciliation within 3 (three) business days after the actual auction. If any auction is declared invalid, the organizer will return 100% of the service fee within 10 business days of the invalidation. Applicants should provide the bank details, in writing, where the refund should be sent.

In the following circumstances, the service fee is non-refundable:

- ✓ the applicant did not provide a financial guarantee for participating in an auction and thus was disallowed;
- ✓ the Applicant admitted to the auction, did not submit any bids to the trading system during the trading session;
- ✓ the Applicant did not become the winner of the auction in accordance with the results of the auction;
- ✓ the auction was announced invalid due to the fact that the competition requirements haven't been met:
 - 1) the total volume of installed capacity of bids for participation in the auction for sale is more than 130% of the volume of demand for installed capacity;
 - 2) the number of participants registered and allowed to participate in the auction is no less than two.

The provision of subparagraph 1) does not apply to bidders for BioPP and HPP projects .

A training on the use of the trading system can be carried out by the organizer, either in person or remotely. Applicants can request training after completing the online registration, signing the auction services agreement, and paying the auction service fee. The trainings end 5 (five) business days before the date of the auction. The online training schedule is published on the KOREM website.

Applicants can also review training materials on the KOREM website on their own.

2.4 Financial Guarantee for Auction Participation

Applicants provide a financial guarantee for participation in the auction to the FSC as a guarantee, should their bid be selected, to sign the PPA with the FSC and submit the PPA performance bond per the terms and timeline set in the Rules of Organization and Holding of Auctions. The financial guarantee for participating in the auction shall be issued in favor of the FSC and submitted not less than 2 (two) working days prior to the date of the auction.

It is recommended to issue the financial guarantee for participation in auctions according to the form

published on the FSC website www.rfc.kegoc.kz. In case of making changes and adjustments to the financial guarantee form, as well as in order to avoid the return of the financial guarantee, it is necessary to first agree its text with the FSC.

The FSC shall send the organizer a list of applicants who have provided financial guarantees and the amounts at least 2 (two) hours before the start of the auction.

The applicant shall choose one of the following types of financial guarantee, issued with the SWIFT system:

- ✓ A bank guarantee, in KZT
- ✓ A standby letter of credit, in KZT

The amount of the financial guarantee is 2,000 (two thousand) KZT per 1 (one) kW of installed capacity multiplied by the installed capacity of the renewable energy facility indicated in the bid.

A financial guarantee deposited by the applicant in the form of a bank guarantee or a standby letter of credit is returned (released) within 3 (three) working days after the auction date via a letter submitted by the FSC to the bank in one of the following cases:

- ✓ The participant did not win the auction, according to the auction results
- ✓ The auction winner signed a PPA and submitted a PPA performance bond

If the auction winner has avoided signing the PPA, the FSC shall issue a claim for payment under the relevant bank guarantee or standby letter of credit.

The financial guarantee shall be valid for at least 150 calendar days from the date of the auction and is irrevocable. The financial guarantee is executed by the bank when the FSC submits the following documents:

- ✓ Statement of the debtor's failure to fulfill its obligations issued in a hard copy, signed by the authorized person of the FSC and certified by the seal of the FSC.
- ✓ The demand for payment indicating the amount to be paid in accordance with the Rules of Organization and Holding of Auctions.

All bank commissions and expenses related to the financial guarantee, including those of the beneficiary's bank, are paid by the debtor. The bank guarantee or the standby letter of credit is accepted:

- ✓ From resident banks of the Republic of Kazakhstan with a long-term credit rating in foreign currency not lower than "B" by Standard & Poor's or "B-" by Fitch or "B3" by Moody's Investors Service or with the rating of the parent organization (which owns more than 50% of the shares of the Republic of Kazakhstan resident bank) not lower than the "BBB" level by Standard & Poor's or "BBB" by Fitch or "Baa2" by Moody's Investors Service. At the

same time, a financial guarantee or a standby letter of credit from non-resident banks of the Republic of Kazakhstan must be confirmed by the resident banks by issuing a counter-guarantee for non-residents' obligations.

- ✓ Non-resident banks in the Republic of Kazakhstan with a long-term credit rating in foreign currency not lower than "BBB" by Standard & Poor's, "BBB" by Fitch, or "Baa2" by Moody's Investors Service may issue a bank guarantee or a standby letter of credit without issuing the corresponding counter-guarantees.

2.5 Procedure for Conducting and Participating in Auctions

The trading session is held according to the Schedule, from 14-00 to 17-00 Nur-Sultan time. The maximum duration of the trading session is 3 (three) hours. At the same time, the main time of the trading session lasts one hour. If after 55 minutes of the trading session, bidders do not submit bids with a price lower than the lowest bid price, the Organizer closes the trading session and determines the results of the auction.

If after 55 minutes, a bidder submits a bid with the price less than the minimum bid registered in the trading system, the trading session is extended for 5 minutes. At the same time, the trading session is extended each time for 5 minutes when the minimum price bid is received from the bidders.

A trading session consists of the following steps:

- ✓ The organizer opens the trading session.
- ✓ The participants submit their bids through the trading system.
- ✓ The organizer closes the trading session.
- ✓ The results of the auction are summed up, including the determination of auction prices.
- ✓ The organizer compiles the register of auction winners and publishes it on its website.

Before the opening of the trading session, the organizer should:

- ✓ Enter the information on the capacity volume auctioned and the auction ceiling price into the trading system, as well as any other information according to the schedule.
- ✓ Enter the information received from the FSC on the amounts of financial guarantees of the bids into the trading system.

During a trading session, the following information is open to participants:

- ✓ General auction information, as specified in the schedule approved by the MoE RK

- ✓ Each bid submitted by the participant with all its parameters (price, time of submission)
- ✓ The lowest price indicated in the submitted bids (without volumes specified)

Bids are accepted from participants from the moment the trading session is opened. Only those participants that participate in the trading session in accordance with the Agreement shall have access to the trading session.

Bid Contents and Submission

Participants' bids shall contain the following basic information:

- ✓ Participant's name
- ✓ The price of electricity per one kilowatt hour net of VAT, indicated in the national currency of the Republic of Kazakhstan with not more than 2 (two) digits after the decimal point
- ✓ The volume of installed capacity, which shall be at least 100 kilowatts, be multiples of 1 (one) kW and shall be indicated in megawatts (MW)
- ✓ The minimum permissible volume of installed capacity
- ✓ The land plot planned to be used for construction of the RE facility and the electric grid connection point

Participants submit their bids to the trading system throughout the trading session, and the prices indicated in the bids shall not exceed the values of the corresponding auction ceiling prices. Bids submitted by participants during the trading session with prices that coincide with bid prices submitted to the trading system by other participants are rejected.

Participants are prohibited from submitting bids that indicate a volume exceeding:

- ✓ The volume of installed capacity auctioned by the authorized body
- ✓ The maximum permissible capacity for the grid connection points
- ✓ The amount of the financial guarantee of the bid

Participants have the right to simultaneously bid for several land plots planned to be used for the RE facility's construction and several electric grid connection points within the limits of the financial guarantees of every single bid submitted.

Bidders participating in the auction for which the Schedule does not offer land plots and grid connection points are allowed to participate in the auction only if they have a properly registered land plot and a grid connection point.

Auction participants shall attach these documents

when registering for participation in the auction. The participants that fail to submit supporting documents on the availability of the land plot and the connection point will not be registered by the Organizer.

A participant who submitted his/her bid to the trading system is prohibited from withdrawing it from the auction.

Participants can change previously submitted bids at their discretion by submitting a new bid before the deadline for submission of the bids expires. However, the new bid shall not specify a price higher than the previous bid and the volume indicated in the previous bid shall remain the same. Price change step in the submitted bid shall be no less than 5 (five) tiyn/kWh (without VAT).

The date and time of submission of bids to the trading system shall be recorded by the organizer with millisecond accuracy .

The participant's submission of a bid to the trading system is sufficient evidence that he agrees to conclude the PPA with the FSC at the price specified in their bid.

Bids submitted online are formed by the participant directly on the organizer's web server using the participant's password as the access key to the trading system.

2.6 Procedure for Calculating Auction Prices

The organizer calculates prices when the following conditions are met:

- ✓ The total volume of installed capacity declared in bids is more than 130% of the volume of capacity demanded.
- ✓ No less than two participants are registered and admitted to participate in the auction.

If these conditions are not met, the organizer does not calculate the prices, closes the auction before the end of the trading session, and invalidates the auction.

A preliminary list of winners is determined after the deadline for the submission of bids expires. Based on the submitted bids, the organizer shall make a ranked schedule, arranged in ascending order of price, until the demand is fully covered.

If there are several bids in the preliminary list of winners that specify the same connection points and the total volume indicated in these bids is less than or equal to the capacity at these connection points, then such bids shall remain in the list of winners.

If there are several bids in the preliminary list of winners that specify the same connection points and the total volume indicated in these bids exceeds the capacity at these connection points, then such bids shall be checked for possible inclusion on this list, starting

from the bid with the lowest price, until the partially satisfied bids for these connection points are determined. After the determination of partially satisfied bids, the declared volume shall be reduced to the remaining volume at these connection points:

- ✓ If the reduced volume of partially satisfied bids is greater than or equal to the minimum permissible volume of the bids, then such bids are satisfied to the remaining volume at these connection points.
- ✓ If the reduced volume of partially satisfied bids is less than the minimum permissible volume of the bids, then such bids are excluded from the list of winners.

Then, the process of re-selecting bids from the ranked list is carried out in the ascending order of prices without the excluded bids for the same connection points, and the preliminary list of winners is determined. This process of exclusion shall be applied until the conditions for the permissible capacity at these connection points are met.

If the number of bids in the preliminary list of winners for the same connection points is less than or equal to the number of possible connections at these connection points, then such bids shall remain in the list of winners.

If the number of bids for the same connection point exceeds the number of possible connections at these connection points, then the bids will be excluded from this list of winners in descending order of prices until the conditions for the number of connections are met.

This process of exclusion shall apply until the conditions for the number of connections are met. If the last bid from the preliminary list of winners cannot be fully satisfied with the existing demand, the following conditions will apply:

- ✓ If the satisfied volume of the last selected bid is 50% or more of its declared volume, then such a bid shall be fully satisfied at the end of the auction or in an amount that does not exceed the maximum permissible capacity of the connection point. At the same time, the volume of installed capacity auctioned by the authorized body will be increased by the amount of the unsatisfied remaining volume of the last selected bid from the ranked schedule.
- ✓ If the satisfied volume of the last selected bid is less than 50% of its declared volume, then this bid shall be checked against the condition for the minimum permissible amount of installed capacity.

Then, the process of re-selecting bids from the ranked schedule is carried out in ascending order of prices without the excluded bid, and the preliminary list of winners is determined. This process of exclusion shall apply until the above conditions are met. In case there are no bids after the exclusion from the ranked

schedule, the volume of the installed capacity will be reduced by the amount of the satisfied volume of the last bid from the ranked schedule.

Annex 3 sets out examples of determining auction prices for different combinations of demand and supply scenarios.

After checking the specified conditions, the organizer determines the winner(s) of the auction and includes them in the register of auction winners. Then, auction prices are determined based on the prices indicated in the submitted bids.

2.7 The specifics of the auctions for BioPP and HPP projects

In order to reduce organic waste, develop the biogas industry in the Republic of Kazakhstan and improve the environmental component, and in order to develop flexible generation, the Auction Rules provide for softer conditions for the selection of BioPP and HPP projects.

In particular, the condition that the total volume of installed capacity of bids for participation in the auction shall be at least 130% of the volume of demand for installed capacity does not apply for BioPP and HPP auctions.

Moreover, the bidders for projects with biomass, biogas and other fuels from organic waste and HPP projects that were not included in the preliminary list of the auction winners will receive the offer from the Organizer whereby they can be included in the preliminary list of winners with the provision of the following conditions related to the auction price:

1. 1% lower than the lowest price specified in the preliminary list of the auction winners, if the ceiling auction price is reduced by more than 50%;
2. 5% lower than the lowest price specified in the preliminary list of the auction winners, if the ceiling auction price reduction is in the range of above 30% to 50% inclusive;
3. 7% lower than the lowest price specified in the preliminary list of the auction winners, if the ceiling auction price reduction is in the range of above 10% to 30% inclusive;
4. 10% lower than the lowest price indicated in the preliminary list of the auction winners if the ceiling auction price reduction is in the range of up to 10% inclusive.

The consent of the auction bidder is formalized by signing such an offer within a certain time period set by the Auction Rules. In this case, if the bidder agrees to implement the project at the minimum price of the winner, the volume of the auction increases by the volume of his submitted bid and the bidder is included in the register of winners of the auction.

2.8 The specifics of the auctions with the documentation

Auctions with documentation were introduced in 2019 and are a type of auctions organized and conducted by the organizer of the auctions in the electronic system and aimed at selecting the winner with the lowest bid price for electricity, taking into account the documentation defining technical and economic parameters of the RES project, prepared in advance and provided to the applicants.

Bidders that participate in auctions with documentation are provided with the following package of documents:

1. Baseline data, marketing research on the construction of a new RES facility, including assessment of resource potential;
2. Results of public hearings and preliminary environmental impact assessment;
3. Location of the land plot with consideration of technical specifications and costs for purchase/lease of the land, taxes;
4. Scheme of power distribution and technical specifications for connection, developed and agreed in accordance with the Grid Code approved by the Order of the Minister of Energy of the Republic of Kazakhstan No. 210 dated December 18, 2014.

Based on the received documentation, the applicants have the opportunity to more thoroughly prepare for participation in auction.

According to the results of the auction with documentation one winner is determined. The winner of the auction with documentation is obliged to reimburse the FSC for the costs of preparing the draft documentation.

In preparation for participation in auctions with documentation, the applicants are required to submit the financial guarantee for participation to the FSC. The guarantee shall be equal to the total volume of auctioned capacity, as defined in the schedule. The amount of financial guarantee for participation in auctions with documentation is 5,000 (five thousand) tenge per 1 (one) kilowatt of installed capacity.

The size of the bid for participation in auctions with documentation must be equal to the total volume of auctioned capacity, determined in the schedule for this type of auctions.

The winner of the auction with documentation is determined by the bid with the lowest price

2.9 Announcement of Auction Results

Based on the results of the auction, the organizer sends notifications of the auction results to the participants in electronic form within one (1) hour after the closing of

the trading session. Written notifications are sent to the participants no later than 6 p.m. Astana time on the next business day.

The register of auction winners is published on the organizer's website within one (1) hour after the closing of the trading session, with an indication of the auction prices and the installed capacity of the RE facilities selected during the auction.

The organizer shall provide the authorized body with a summary of the auction results with an explanation of the auction procedure and complete information about all the bids submitted to the trading system, as well as the register of auction winners, not later than one (1) working day after the closing of the trading session.

The authorized body shall provide a list of auction winners in the RE facilities' siting plan and a list of energy producing organizations that use RES within five (5) working days from the date of receipt of the register of auction winners from the organizer.

The winners of the auction shall apply for a PPA with the FSC within sixty (60) calendar days after being included in the list of energy producing organizations that use RES.

Suspension and Cancellation of the Auction

The auction can be suspended for up to 30 minutes under the following circumstances:

- ✓ Technical problems with the server equipment or failure of the electronic system leading to the inoperability of the trading system
- ✓ Technical malfunctions of the equipment or Internet communication channels preventing access to the trading system

In case of suspension of the auction, the organizer promptly informs the participants through available technical means of communication of the reason for the suspension of the auction, specifying the time during which the auction process will be renewed.

The auction can be canceled if the following circumstances occur:

- ✓ The elimination of technical problems takes longer than 30 minutes.
- ✓ A long (more than two hours) break in the power supply of the trading hall and/or server equipment of the trading system.

In the event the auction is canceled, another auction will be held. Another auction is held on the next working day after the date of the cancelled auction.

Disputes arising during the organization and conduct of auctions shall be settled according to procedures set forth in the civil legislation of the Republic of Kazakhstan.



3. POWER PURCHASE AGREEMENT

3.1 General Provisions

According to Paragraph 1, Article 9 of the Law of the Republic of Kazakhstan on the Support for the Use of RES, an energy producing organization that uses renewable energy sources shall have the right to sell the produced electric energy at its discretion using one of the following options:

- ✓ To the financial settlement center at the feed-in tariff that is valid as of the date of signing of the PPA between the organization and the FSC, or at an auction price determined based on auction results, considering indexation.
- ✓ To the consumers through signed bilateral agreements in accordance with the power industry regulations of the Republic of Kazakhstan.

When participating in the RE auction, the auction winners conclude the PPA with the FSC at the auction price determined during the auction.

The date when the FSC begins to purchase the electricity produced by the RE facility is the date of the beginning of a comprehensive testing of the RE facility's electrical installations, during which the electricity is delivered to the electric grids of the energy

transmission organization.

The FSC pays the applicant for the entire volume of the electricity produced and delivered to the grid for 15 (fifteen) years from the date of the beginning of the comprehensive testing of the RE facility's electrical installations in accordance with the terms of the concluded PPA.

This section describes the procedure for the centralized purchase by the FSC of electricity produced at new RE facilities at auction prices.

3.2 Inclusion of the Auction Winners in the RE Facilities Siting Plan

The MoE shall include the winners of the auction in the RE facilities siting plan within five working days from the date of receipt of the register of the auction winners

from the organizer.¹¹

The RE facilities siting plan is developed based on the following data and is approved by the authorized body:

- ✓ The renewable energy sector development targets
- ✓ The list of existing RE facilities, indicating the installed electric capacity, the unified power system (UPS) zone (district) where they are located, and the type of RE facilities
- ✓ The maximum permissible capacity of RE facilities by the UPS zones (districts) and by types of RE facilities
- ✓ The register of auction winners
- ✓ RE facilities construction projects of qualified conditional consumers

The renewable energy sector development targets for each type of RES are approved by the MoE RK. The list of operational RE facilities is formed in accordance with the Rules for Monitoring the Use of RES, approved by Order No. 74 of the Minister of Energy of the Republic of Kazakhstan as of February 11, 2015.

The MoE approves the maximum permissible capacity of RE facilities by the UPS zones (districts) for the coming year.

The projects of energy producing organizations that use RES are excluded from the siting plan in the following cases:

- ✓ Untimely submission of an application for the agreement on RE facilities connection by the energy producing organization to the energy transmission organization that issued the technical specifications for connection to the electric grid
- ✓ Failure to conclude the agreement on RE facilities connection within the specified time, due to the fault of the energy producing organization that uses RES
- ✓ Upon termination of the agreement on RE facilities connection
- ✓ Upon the exclusion of the organization from the list of energy producing organizations that use RES

3.3 Inclusion of the Auction Winners on the List of Energy Producing Organizations that Use RES

The MoE shall include the winners of the auction in the list of energy producing organizations that use RES within 5 working days from the date of receipt of the register of the auction winners from the organizer (the List).¹²

Within 2 working days from the moment of inclusion of the energy producing organization in the List, the MoE RK informs the energy producing organization and the FSC of the inclusion in writing.

Energy producing organizations that use RES are excluded from the List in the following cases:

- ✓ Upon failure to submit the application for the PPA's conclusion to the FSC within 60 calendar days after being included in the List
- ✓ If the PPA with the FSC ceases to be effective or is terminated
- ✓ Upon exclusion of the RE project from the RE facilities siting plan

3.4 Conclusion of the PPA by the Energy Producing Organization that Use RES at Auction Prices

The applicant that is recognized as the winner of the auction submits an application for the conclusion of the PPA to the FSC within 60 calendar days from the date he and his corresponding renewable energy project were included in the list of energy producing organizations that use RES, published on the MoE RK website. The PPA shall be concluded according to the standard form given in [Annex 4](#).

The applicants shall attach the application for the conclusion of the PPA with the FSC with the following:

- ✓ Articles of incorporation
- ✓ A document confirming that the person is authorized to sign the PPA
- ✓ Information regarding the planned volumes of electricity supply
- ✓ A copy of the written notification of the results of the auction

The FSC reviews the application and the submitted documents within no more than 10 working days from the date of their receipt. If the applicant did not submit the full package of documents, the FSC returns the application specifying the reasons for the return within 5 working days from the date of the receipt.

The applicant supplements the application with the missing documents and/or addresses the comments of the FSC within 15 calendar days from the date the application was returned.

At the same time, the FSC concludes the PPA with the applicant when the following conditions are met:

- ✓ The applicant submitted all required documents.

¹¹ The Order of the Acting Minister of Energy of the Republic of Kazakhstan dated July 27, 2016 No. 345, On Approval of the Rules for the Formation of the RE Facilities Siting Plan.

¹² The Order of the MoE RK, dated November 9, 2016, No. 482, On Approval of the Rules for the Formation of a List of Energy Producing Organizations Using Renewable Energy Sources.

- ✓ The renewable energy facility and the applicant are included in the list based on the results of the auction.
- ✓ There is no existing PPA between the FCS and the applicant.
- ✓ The applicant chooses to sell the produced electricity via the FSC.
- ✓ The applicant met the deadline for submitting the application for the conclusion of the PPA and submitted a full package of documents for the conclusion of the PPA.

The FSC sends two copies of the draft PPA to the applicant within 10 working days from the date it receives the documents. The PPA indicates the auction price for this applicant in accordance with the register of auction winners.

Scope of the PPA

In accordance with the PPA, the Seller (energy producing organization – investor) sells and the Buyer (the FSC) buys the entire amount of electrical energy produced at the seller's power plant and delivered to the delivery point.

The price of electric energy under the PPA is the auction price determined based on the results of the completed auction.

Annual indexation of the auction price is carried out according to the procedure established in the Rules for Determination of Feed-In Tariffs and Ceiling Auction Prices.

Metering of the Volume and Payment for the Electricity

The volume of delivered electricity is metered based on the readings of the seller's commercial metering devices installed at the delivery point.

After the buyer ensures that the Automated Commercial Energy Metering System (ACEMS) at his facility is operational, he has the right to use ACEMS data to meter and determine the volumes of electricity delivered by the seller and for commercial mutual settlements between the seller and the buyer.

The electric energy produced by the power plant and delivered to the grid of the power transmission organization during the period in which the commercial metering devices at the delivery point are absent or malfunctioning is not paid for by the buyer and is not taken into account in the mutual settlements. At the same time, the fact and the period of absence or malfunction of the seller's commercial metering devices must be confirmed by the relevant statement of the energy transmission organization on the grids to which the power plant is connected. The buyer pays for the electricity within 15 working days.

Seller is Obligated to:

1. Provide the FSC with a copy of the notice on the beginning of the construction and installation works of the RE facility which is the subject of the PPA, sent to the State Architectural and Construction Supervision Authority (GASK) within 12 months from the date of signing of the PPA for solar, within 18 months for wind and biogas, and within 24 months for hydro.
2. Provide the FSC with a copy of the operational acceptance certificate of the RE facility within 24 months from the date of signing of the PPA for solar power plants, within 36 months from the date of signing of the PPA for wind and biogas power plants, and within 48 months from the date of signing of the PPA for hydro power plants.

At the same time, the indicated terms are prolonged for one calendar year if, before the expiration of the term stipulated above, the organization authorized for architectural and construction control and supervision will confirm that at least 70% of the total scope of RE facility construction and installation has been completed.
3. Provide the buyer with the PPA performance bond within 30 calendar days from the date of signing of the PPA.
4. Provide information on the presence of credit obligations in foreign currency received for implementing the RE facility construction project annually, no later than October 1.
5. Build a renewable power station with the use of new generating units (that have never been in operation before).

Seller's Liabilities:

- ✓ If the seller violates the deadline for submission of the copy of the notice on the beginning of the construction and installation of the RE facility for more than 6 months, the buyer retains 30% of the PPA performance bond.
- ✓ If the seller violates the deadline for submission of the copy of the operational acceptance certificate of the RE facility, the buyer retains 100% of the PPA performance bond.

Dispute Settlement

Disputes arising from the Power Purchase Agreement are subject to settlement in accordance with the legislation of the Republic of Kazakhstan. All disputes related to the conclusion, validity, execution, amendment, suspension and termination of the Agreement shall be heard by the court having jurisdiction over the buyer's seat (Nur-Sultan City, Kazakhstan).

At the same time, according to the amendments and

additions to the standard form of the Power Purchase Agreement and the Rules for the Centralized Purchase and Sale of Electric Energy¹³, the disputes of the parties under the power purchase agreement can be referred to international arbitration, namely to the International Arbitration Center of the Astana International Financial Center (AIFC). In general, following the international arbitration practice, the rules of the AIFC and those of its International Arbitration Center (IAC) allow the choice of IAC Rules, UNCITRAL Model Rules or ad hoc rules, which is consistent with the policies of several international financial institutions.

The Rules for the Centralized Purchase and Sale of Electric Energy establish the following conditions for dispute settlement at the International Arbitration Center of the AIFC:

- ✓ *the rules and the language of arbitration - at the choice of the applicant;*
- ✓ *the composition of arbitration - 3 arbitrators;*
- ✓ *applicable law - substantive law of the Republic of Kazakhstan;*
- ✓ *place of arbitration - Nur – Sultan.*

At the same time, before concluding an arbitration agreement, the FSC is obliged to obtain the relevant consent of the authorized body.

Validity Period of the PPA and the Auction Price

In general, according to Paragraph 109 of the Rules for the Centralized Purchase and Sale by the Financial Settlement Center of Electric Energy, the PPA and the auction price indicated therein shall cease to be effective 15 (fifteen) years after the date of the beginning of the purchase of the electric energy produced by the RE facility according to the PPA. However, there are exceptions to Paragraph 109, according to which the 15-year countdown starts the day following the day of the expiry of the deadline for provision of the copy of the operational acceptance certificate of the RE facility. At the same time, the deadline for providing the copy of the facility's operational acceptance certificate is prolonged for one calendar year if, before the expiration of the deadline, the organization (person) authorized for technical supervision according to the architectural, urban planning and construction laws of the RK provides confirmation that at least 70% of the total scope of RE facility construction and installation has been completed.

PPA Final Provisions

The PPA ceases to be effective when:

- ✓ The seller doesn't meet the deadline for commissioning of the renewable energy facility.
- ✓ The seller sells the produced electric energy at contract prices under bilateral contracts with consumers during the validity period of the PPA.
- ✓ The seller violates the deadline for the provision of the PPA performance bond.

According to Paragraph 106 of the Rules for the Centralized Purchase and Sale by the Financial Settlement Center of Electric Energy Produced by Renewable Energy Facilities, Recalculation and Redistribution by the Financial Settlement Center of the Corresponding Share of Electric Energy for Qualified Conditional Consumers at the end of the Calendar Year, approved by the Order of the MoE RK dated March 2, 2015, No. 164, after signing the PPA, the seller also provides the FSC with the following documents:

- ✓ A copy of the notice on the beginning of the construction and installation of the RE facility which is the subject of the PPA sent to the GASK: within 12 months from the date of signing of the PPA for solar, within 18 months from the date of signing of the PPA for wind and biogas, and within 24 months from the date of signing of the PPA for hydro.
- ✓ A copy of the operational acceptance certificate of the RE facility, which is the subject of the PPA, approved in accordance with the architectural, urban planning and construction regulations of the Republic of Kazakhstan: within 24 months from the date of signing of the PPA for solar, within 36 months for wind and biogas, and within 48 months for hydro.

The deadline for the provision of the copy of the operational acceptance certificate of the RE facility is prolonged for one calendar year if before the expiration of the term stipulated above, the organization (person) authorized for technical supervision according to the architectural, urban planning and construction laws of the RK will provide confirmation that at least 70% of the total scope of RE facility construction and installation has been completed.

According to clause 106-1 of the Rules, the terms specified in sub-clauses 1) and 2) of clause 106 of the Rules are extended once for a period not exceeding 1 (one) calendar year, according to the request of the

¹³ International arbitration related additions to the Rules for the Centralized Purchase and Sale by the FSC of Electrical Energy produced by renewable energy facilities were made by the Order of the Ministry of Energy of the Republic of Kazakhstan No. 224 dated 19.06. 2019.

Order of the Ministry of Energy of the Republic of Kazakhstan introducing amendments to the standard power purchase agreement in relation to international arbitration is currently at the final stage of approval.

Applicant (in any form) who has a valid power purchase agreement concluded before March 31, 2020 submitted to the Financial Settlement Center, but no later than the deadline for the provision of the above documents, subject to the extension of the validity period of the PPA performance bond.

- ✓ A copy of the act of delineating balance sheet attribution and operational responsibilities of the parties: within 10 working days from the date of the signing the act of delineation of balance sheet attribution and operational responsibilities of the parties and before the beginning of the comprehensive testing of the renewable energy facility.
- ✓ A copy of the certificate of acceptance of the scheme of commercial metering of electric energy, including the layout of commercial and technical metering devices at the renewable energy facility: within 10 working days from the date of the signing of the certificate of acceptance of the scheme of commercial metering of electric energy and before the beginning of the comprehensive testing of the renewable energy facility.
- ✓ At the request of the financial settlement center, the seller reports the progress of the construction of the renewable energy facility.
- ✓ The PPA performance bond within 30 calendar days from the date of signing of the PPA.

The date when the purchase of the electricity produced by the renewable energy facility begins is the date of the beginning of a comprehensive testing of the electrical installations of the applicant's renewable energy facility, during which the electricity is delivered to the electric grids of the energy transmission organization.

PPA Termination

The PPA and the corresponding auction price cease to be effective after 15 years from the date of the commencement of the purchase of electrical energy produced by the RE facility in accordance with the PPA, except in the following cases:

- ✓ Violation of the deadline for the provision of a copy of the operational acceptance certificate of the RE facility
- ✓ Failure to provide the PPA performance bond

Step-in Rights¹⁴

To be consistent with international practice, the MoE RK introduced amendments to the standard PPA to include a mechanism for granting the seller's creditors¹⁵, who provide financing or refinancing for the

RE project (with the exception of shareholders or affiliates of the seller), the right to directly manage the RE project (step-in rights). In particular, if the seller attracts loan for the construction of RE facility from financial institutions and at the same time substantially violates his obligations under the contracts with his creditors, the buyer (the FSC) has the right:

1. To make payments in favor of the financial organization, upon receiving a corresponding reasonable demand from it;
2. To replace the seller, upon receipt of a request from the financial institution about the need for such a replacement.

The FSC also undertakes to provide information to the financial institution on cases of non-performance of obligations by the seller, which may lead to early termination or suspension of the contract.

3.5 PPA Performance Bond

The PPA performance bond is provided by the applicant within 30 calendar days after the conclusion of the PPA in one of the following ways:

- ✓ A bank guarantee
- ✓ A standby letter of credit

The applicant provides the bank guarantee or the standby letter of credit: from the resident banks of the Republic of Kazakhstan with a long-term credit rating in foreign currency not lower than "B" by Standard & Poor's or "B-" by Fitch or "B3" by Moody's Investors Service or with the rating of the parent organization (which owns more than 50% of the shares of the resident bank of the Republic of Kazakhstan) not lower than the "BBB" level by Standard & Poor's or "BBB" by Fitch or "Baa2" by Moody's Investors Service.

At the same time, the bank guarantee or the standby letter of credit from non-resident banks of the Republic of Kazakhstan must be confirmed by resident banks, by issuing a counter-guarantee for non-residents' obligations. Non-resident banks with a long-term credit rating in foreign currency not lower than "BBB" by Standard & Poor's or "BBB" by Fitch or "Baa2" by Moody's Investors Service can issue a bank guarantee or a standby letter of credit without issuing the respective counter-guarantees.

The amount of the PPA performance bond is 10,000 KZT per 1 kW of installed capacity multiplied by the installed capacity of the renewable energy facility indicated in the register of the auction winners.

The bank guarantee or the standby letter of credit shall

¹⁴ The changes to the PPA associated with the step-in rights are currently at the final stage of approval.

¹⁵ In this case, creditors are financial institutions, namely legal entities engaged in entrepreneurial activities and providing financial services, as well as international financial organizations.

be irrevocable and provide for the possibility of being executed in whole or in part as ordered by the beneficiary and shall be valid for the following periods since the date of signing of the PPA:

- ✓ For solar power plants: for at least 25 months
- ✓ For wind and biogas power plants: for at least 37 months
- ✓ For hydro power plants: for at least 48 months

The bank guarantee or the standby letter of credit is executed by the bank when the following documents are submitted by the FSC:

- ✓ The statement of failure to fulfill obligations by the debtor
- ✓ The demand for payment indicating the amount to be paid in accordance with the PPA

All bank commissions and expenses related to the performance bond, including those of the beneficiary's bank, are paid by the winner of the auction.

The PPA performance bond shall be returned in the case of timely commissioning of the RE facility within 10 working days from the date of submission of the written request.

The PPA performance bond shall be retained in the following cases:

- ✓ When there is a failure to provide a copy of the notice on the beginning of the construction and installation of the RE facility: within 12 months (for solar), 18 months (for wind and biogas), or 24 months (for hydro) from the date of signing of the PPA, 30% of the PPA performance bond shall be retained.
- ✓ Failure to provide a copy of the operational acceptance certificate of the RE facility: 100% of the

PPA performance bond shall be retained; and in the case when the performance bond is to be partially executed – 70% of the PPA performance bond shall be retained within the following timeframe after the date of the PPA's signing:

- For solar power plants – within 24 months
- For wind and biogas power plants – within 36 months
- For hydro power plants – within 48 months.

According to clause 101-1 of the Rules, in the case provided for in clause 106-1 of the Rules, the procedure for retaining (calling on) the PPA performance bond is carried out taking into account the extension of the specified periods.

3.6 Auction Prices Indexation

The FSC undertakes to purchase electric energy produced and supplied to Kazakhstan's unified power system by the RE facilities at auction prices based on the auction results, taking into account indexation.

According to the Law of the Republic of Kazakhstan on Support for the Use of RES, the auction price is the price of purchase by the financial settlement center of electric energy produced by a RE facility, determined based on the auction results and which does not exceed the level of the corresponding ceiling auction price. The ceiling auction price is the maximum value of the auction price for electric energy.

The ceiling auction prices for the electric energy produced by the RE facilities are approved by the Order of the Minister of Energy of the Republic of Kazakhstan dated January 30, 2018, No. 33.

The ceiling auction prices are indicated in Table 4:

Table 5. Ceiling Auction Prices for 2020

No.	RES technology used to generate electric energy	Tariff, tenge/kWh (net of VAT)
1	Wind power plants for wind energy conversion	21.69
2	PV converters of solar energy for solar energy conversion	16.97
3	Hydro power plants	15.48
4	Biogas plants	32.15

In accordance with the provisions of the Rules for the Determination of Feed-In Tariffs and Ceiling Auction Prices approved by the Decree of the Government of the RK dated March 27, 2014, No. 271, the financial

settlement center shall index auction prices annually and conclude the respective amendments to the concluded agreements. The annual indexation of auction prices starts after one year of RE facility

operation.

For the first auctions in 2018, the ceiling auction prices are determined at the level of feed-in tariffs, approved by the Decree of the Government of the Republic of Kazakhstan dated June 12, 2014, No. 645.

The ceiling auction prices for the subsequent auctions will be determined based on the results of the previous auctions at the maximum price of the winner. Auction prices are indexed once a year on October 1 taking into account inflation using the following formula:

$T_{t+1} = T_t * CPI$, where

T_{t+1} is an indexed auction price, calculated by the above formula, rounded downwards to the nearest whole *tyñ* (one-hundredth of a tenge).

T_t is an auction price, taking into account the previous indexation, if there was any.

CPI is a consumer price index, accumulated for the 12 months preceding October 1 of the year of indexation, determined according to the data of the authorized national statistics body.

For the projects that have credit obligations in foreign currency, the auction prices are indexed once a year on October 1, taking into account inflation and changes in the exchange rate of the national currency against convertible currencies, using the formula:

$$T_{t+1} = T_t \times \left(1 + 0,3 \times \frac{(-100\%)}{100\%} + 0,7 \times \frac{USD_{t+1} - USD_t}{USD_t} \right)$$

where:

T_{t+1} is an indexed auction price, calculated by the above formula, rounded downwards to the nearest whole *tyñ*.

T_t is an auction price, taking into account the previous indexation, if there was any.

CPI_t is a consumer price index, accumulated for the 12 months preceding October 1 of the year of indexation, determined according to the data of the authorized national statistics body.

USD_{t+1} is a current exchange rate of KZT to USD as of October 1 of the year of indexation, determined according to the data of the National Bank of the Republic of Kazakhstan.

USD_t is an average exchange rate of KZT to USD for the 12 months preceding October 1 of the year of indexation, determined according to the data of the National Bank of the Republic of Kazakhstan.

The calculation of indexation is carried out by the FSC

every year until October 10. The auction prices indexation calculations are published by the FSC on its official website no later than October 15 of the corresponding year.

The first indexation is applied not earlier than one calendar year after the beginning of electricity supply from renewable energy sources. Subsequent indexations are carried out twice a year: from July 1 for RE facilities that started supplying electricity during the period from January to June, and from January 1 for RE facilities which started supplying electricity in the period from July to December.

3.7 Reserve Fund

In accordance with The Law of the Republic of Kazakhstan on Support for the Use of RES, the financial settlement center forms a reserve fund to cover its cash deficiencies and debts to energy producing organizations that use renewable energy sources arising from non-payment or delay in payment by the conditional consumers for the delivered electricity produced by the RE facilities.

The FSC forms the reserve fund¹⁶ using the contributions of funds to a specially created bank account in a second-tier bank of the Republic of Kazakhstan.

The reserve fund is formed in *tenge*. The size of the reserve fund is 3% of the annual expenses of the FSC for electric energy purchases from RE facilities.

Each year by December 30 the FSC:

- ✓ Calculates the costs for purchases of electric energy produced from renewable energy sources by energy producing organizations by zones of electricity consumption for the forecast year
- ✓ Calculates the costs for the formation of the reserve fund by zones of electricity consumption for the forecast year using the following formula:

$$RFC = C_{fixed} \times 3\% - RFC_{exp}, \text{ where}$$

RFC are the costs of reserve fund formation for the forecast year, relating to the consumption zone Z_i .

RFC_{exp} are the costs of reserve fund formation at the beginning of the forecast year.

C_{fixed} are the annual costs of the FSC for the purchase of electric energy in the consumption zone Z_i .

3% is the size of the reserve fund as the share of the annual expenses of the FSC.

Z_i is a zone of consumption.

¹⁶ The Order of the Acting Minister of Energy of the Republic of Kazakhstan dated July 29, 2016, No. 361, On Approval of the Rules for the Formation and Use of the Reserve Fund.

The costs of reserve fund formation are taken into account by the FSC in determining the tariff for the support of RES. The costs of the reserve fund's formation are subject to monthly adjustment depending on the change in the data used for calculation.

Each month, ten calendar days before the month of supply, the energy producing organizations that use RES provide the FSC with information on the projected volumes of electricity generation and release into the grid until the end of the current year.

The FSC determines the difference between the projected and the actual costs for the formation of the reserve fund as of the month preceding the billing month.

If the projected costs for the formation of the reserve fund are less than or exceed the actual amount necessary to form the reserve fund in the month preceding the billing month, the FSC recalculates and reallocates the difference for the remaining period until the end of the current calendar year. The provisions of this paragraph do not apply to the last month of the calendar year.

On the basis of estimated data, no later than the 15th day of the billing month, the FSC shall adjust the costs for the formation of the reserve fund each month for the remaining period until the end of the current calendar year and take into account this information when adjusting the tariff for the support of RES.

The FSC shall determine the amount of the cash deficiency and use the money in the reserve fund to cover this cash gap not later than 15 working days after the end of the payment deadline established for the conditional consumers. This money is reimbursed and credited to a special bank account of the reserve fund at the expense of the funds received from the conditional consumers.

The formation of the reserve fund of the FSC for RES started in January 2017.

3.8 Procedure for Centralized Sale of Electricity Produced by Renewable Energy Facilities to Conditional Consumers

According to the requirements of the Law on the Support for the Use of RES, the FSC distributes the expenses for the support of the use of renewable energy sources among the conditional consumers of electricity proportionate to their shares of delivery to the grids.

The conditional consumers of electricity produced from renewable energy sources include energy producing organizations that use coal, gas, raw materials containing sulfur, oil products and nuclear

fuel; companies that acquire electric energy outside the Republic of Kazakhstan; and hydroelectric power stations with installations located within one hydro system, with a total capacity of more than 35 MW (with the exception of those commissioned after January 1st, 2016).

The conditional consumers are obliged to sign agreements each year with the FSC for the purchase of electric energy produced by energy producing organizations that use renewable energy sources in accordance with the standard form and pay for the electricity generated by RES no later than 30 calendar days after the end of the month it was delivered.

The FSC drafts a sales contract with the conditional consumers in accordance with the standard form of the sales contract, approved by the authorized body.

According to the Law on Support for the Use of RES, the conditional consumer's costs for the purchase of electrical energy produced by renewable energy facilities from the financial settlement center are taken into account in determining the value of the ceiling tariff for electricity.

In accordance with the Rules for the Centralized Purchase and Sale by the Financial Settlement Center of Electric Energy Produced by Renewable Energy Facilities, the actual volume of electric energy produced by energy producing organizations using renewable energy sources delivered to the grid and the volume of electricity delivered to the grid by the conditional consumers (including electricity imports) are determined based on the actual balance of electricity production/consumption in the wholesale market for electric energy, formed by the system operator for the billing month.

In accordance with the Rules for the Centralized Purchase and Sale by the Financial Settlement Center of Electric Energy Produced by Renewable Energy Facilities, the expenses for the support of the use of renewable energy sources are distributed by the FSC among the conditional consumers of electricity proportionate to their shares of delivery to the grid.



4. REGISTRATION OF LAND RIGHTS, SPECIAL WATER USE AND DESIGN AND SURVEY WORKS PERMITS

4.1 General Provisions

Foreign nationals and foreign entities may obtain private ownership of land plots for construction or land plots occupied by industrial and non-industrial, including residential, buildings (structures) or complexes, including lands intended for building service (structures) in accordance with land category, except for lands designated for agricultural production and afforestation.

However, land plots located in the border zone of the Republic of Kazakhstan cannot be owned by foreign nationals, stateless persons, citizens of the Republic of Kazakhstan married to foreign nationals or stateless persons, as well by foreign legal entities and legal entities of the Republic of Kazakhstan with foreign participation.

After citizens of Kazakhstan enter into marriage with foreign nationals or stateless persons, the ownership rights for land plots located in the border zone and the border strip of the state border of the Republic of Kazakhstan are subject to re-registration or alienation.¹⁷

Citizens (including foreign nationals) and legal entities (including foreign ones) can also be granted the right of temporary land use, which can be short term (up to 5 years) and long term (from 5 to 49 years).

Foreign land users cannot acquire the right of permanent land use for any category of land plot.

Foreign land users include, among others, foreign nationals, legal entities established in accordance with the laws of foreign states, foreign states and international organizations.

Reservation of Lands

In accordance with the Law of the RK on Support for the Use of RES and the Auction Rules approved by the Order of the Minister of Energy of the Republic of Kazakhstan as of December 21, 2017, No. 466, the local executive authorities of regions, cities of republican significance and the capital shall reserve land plots for the construction of renewable energy facilities until the auction winners are given the land title, according to the Land Code of the Republic of Kazakhstan dated June 20, 2003, and shall send the relevant information to the MoE RK. The procedure for reserving lands is determined by the Rules for the

¹⁷ According to the provisions of Article 66 of the Land Code.

Reservation of Land approved by the Order of the Minister of National Economy of the RK dated February 28, 2015, No. 178.

The contacts of the mayor's offices of the cities of Almaty, Astana, and the regions are listed in [Annex 5](#).

If a land plot slated for construction is not used for its intended purpose within three years from the date the decision to grant it was made (unless a

longer period is provided for in the design and estimates documentation), then the land plot is subject to expropriation.¹⁸

The ownership right for the lands owned by the state is granted in accordance with the general procedure provided for in Article 43 of the Land Code of the Republic of Kazakhstan dated June 20, 2003, No. 442-II (hereinafter referred to as the LC RK).



Figure 1. The General Procedure for Land Registration (D&S = design and survey)

4.2 Investor Selection of a Land Plot

The first stage in the implementation of any RES project is choosing the site where the generating station will be built. Site selection is one of the most critical decisions and determines the success of the project's implementation because the site determines how optimally a RES will be used and, consequently, the economic feasibility of the project. This is particularly true for wind, hydro and solar energy.

When the land belongs to the state, the investor must either obtain the right to short-term (up to 5 years) or long-term (from 5 to 49 years) land use or buy the land from local executive authorities.

If the land is privately owned, the developer has the right to buy it from the owner. This is a fairly simple method that is not particularly regulated by the law. The transfer of ownership should be accompanied by:

- ✓ Registration of purchase/sale in the registering authority – the public service center (PSC) – that is responsible for the area where the plot is located.
- ✓ Receipt of a land title deed specifying that the plot has been registered, as well as a certificate of state registration (in cases stipulated by law).

In this case, the investor must conclude a lease contract, a land use contract or land purchase-sale contract in accordance with the approved contract forms. The terms of these contracts are usually non-negotiable.

According to Paragraph 1, Article 71 of the LC RK, for carrying out design and survey work (D&S) on a plot of land, individuals and legal entities that carry out land surveying, design and other survey works can conduct

these works without withdrawing the plots from the private owners or land users. Obtaining a permit to use land plots for surveying is free of charge. If the survey is accepted, the right to use the land can be formalized. The only reason developers do not take this opportunity is that they don't get exclusive rights to this land for the period of the survey. It is possible in theory that some other developer will register to use the land during this period. The legislation allows developers to use an "arbitrary" form of contract, under which they can ensure exclusive rights to this land throughout the D&S. But in practice, most developers prefer to formalize their land rights before they invest.

Owing to the nature of renewable energy projects and the remoteness of land plots suitable for such projects, in most cases, these lands are in the public domain. Section 4.4 provides a detailed description of the steps and procedures the investor needs to obtain the right to temporarily use or purchase the land plot from the state.

In general, the Land Fund of the Republic of Kazakhstan is divided into the following categories based on the intended purpose:

- ✓ Agricultural lands
- ✓ Settlement lands (cities, towns, rural settlements)
- ✓ Lands for industry, transport, communications, activity spaces, defense, national security and other non-agricultural purposes
- ✓ Lands for nature reserves, sanatory lands, lands of recreational and historical-cultural designation
- ✓ Forestry fund lands

¹⁸ The procedure for expropriation is stipulated in Article 94 of the Land Code.

- ✓ Water fund lands
- ✓ Reserve lands

Lands are attributed to these categories and transferred from one category to another due to changes in their intended use by the Government of the Republic of Kazakhstan, LEAs of the regions, cities of republican significance, the capital, districts, and cities of regional significance. The process for changing the land plot's intended use is described below.

Reserve lands are lands with no registered ownership or land use right and are under the jurisdiction of district-level authorities. The transfer of reserve lands to other land categories is carried out simultaneously with the provision of the right to ownership or land use.

Agricultural production that is lost¹⁹ due to the withdrawal of agricultural lands and their use for other purposes shall be compensated to the national budget to maintain the level of agricultural production by restoring agricultural lands and their quality.

Compensation for losses in agricultural production is made by persons who are granted agricultural land for non-agricultural purposes from all land categories except for lands for industry, transport, communication sites, defense, national security and other non-agricultural purposes, and also by persons for whom security, sanitary and protective zones are established.

Losses in agricultural production shall be compensated within six months from the date of the decision to grant the right to a land plot or changes are made in the intended purpose of agricultural lands.

4.3 Design and Survey Works

The first stage in the construction or reconstruction of a new facility or the expansion or technical re-equipment of an existing facility is the design and survey work.²⁰

Based on the results of an engineering survey, the design documentation, construction investment rationale, construction plan and working documentation for the construction of enterprises, buildings and structures, including expansion, reconstruction, technical upgrade, operation and removal of facilities, are developed, including updating the national cadasters and information systems of settlements, and economically, technically, socially and environmentally appropriate design decisions are proposed.

¹⁹ The Order of the Minister of National Economy of the Republic of Kazakhstan Dated December 23, 2014, No. 161, On Approval of Standards for Compensation of Losses of Agricultural Production Caused by the Withdrawal of Agricultural Lands to be Used for Other Purposes.

The engineering survey for construction includes the following main types of surveys: engineering geodesic, engineering-geological, engineering - hydrometeorological, engineering and environmental surveys, exploration of ground building materials and sources of water supply based on groundwater, geotechnical control, soil survey of foundations of buildings and structures, justification of measures for engineering protection of territories, local monitoring of environmental components, geodetic, geological, hydrogeological, hydrological, cadastral and other related works and studies (observations) in the process of construction, operation and removal of facilities, scientific research during the process of engineering surveys for the construction of enterprises, buildings and structures, on-site supervision of the use of survey products in the process of construction by the commission (working group), and engineering services for arrangement and implementation of engineering surveys.

Engineering surveys for construction or some of their types (works, services) must be carried out by licensed legal entities and/or individuals (surveyor), who have appropriate license.

The basis for performing engineering surveys is the agreement (contract) between the customer and the surveyor with the following integral annexes: terms of reference (letter), calendar schedule of works, cost estimation, and, if available, the requirements of the customer, the engineering survey program, as well as amendments to the contract if there are changes in the scope, timeframe and conditions of work.²¹

The cost and deadlines for D&S are established by the contract between the design company and the customer.

Individuals and legal entities that carry out geological, geophysical, exploration, geodetic, soil, geobotanical, land surveying, archaeological and other survey works can carry out these works without withdrawing the lands from private owners or land users.

At the same time, survey works for construction purposes are carried out on lands owned by the state without granting the right to a land plot, provided that the designed construction project complies with the urban development plans (master plan, detailed planning and development projects) approved in the order established by the architectural, urban planning and construction legislation of Kazakhstan.

The customer can carry out D&S after obtaining permission from the district, city-level LEAs, and in case of D&S on arable lands, improved hayfields and

²⁰ Art. 71 of the Land Code.

²¹ It is advisable to carry out the D&S under the framework of the turnkey contract for construction and installation works and specify D&S as a separate item in the cost estimate.

pastures, on the lands occupied by perennial plantations, and on the lands of nature reserves and the Forestry Fund from LEAs of regions, cities of the republican significance, and the capital.

The D&S timeframe, the location of work, the obligations to compensate for losses and reclaim the land for further intended use, as well as other conditions are determined by the contract concluded by the surveyor (the customer) with the private owner or land user or the LEA of the region, the city of the republican significance, the capital, district, or city of regional significance depending on the location of the land plot.²²

To obtain a D&S permit,²³ the investor must submit the following documents to the LEAs of the regions, Astana and Almaty cities, districts and cities of regional significance, or to the PSC:

- ✓ Application according to [Annex 6](#)
- ✓ Beneficiary identification document (the original submitted for identifying the beneficiary)
- ✓ Plan (scheme) of the D&S site
- ✓ Copy of the design and survey work specifications

This service can be also received from the portal [egov.kz](#).

The permit is denied if:

- ✓ It was found that the documents submitted by the beneficiary for receiving a public service and/or data (information) contained in them are inauthentic.
- ✓ There is a legally binding court decision on the basis of which the service recipient is deprived of a special right associated with the provision of the public service.

For verification purposes, the applicant shall submit original documents along with copies that will be returned to the applicant upon verification.

The deadline for the provision of the service is 10 working days from the date of submission of the documents.

The deliverable of the public service - the order for the issuance of a permit for the use of a land plot for survey works.

Cost of service: free of charge.

²² The D&S contract is concluded with the LEA if on the reserve lands or on lands of other categories, there are no owners of land plots or land users.

²³ Source: Standard of Public Service: Issue of a Permit for the Use of a Land Plot for Surveying Works, Appendix 10 to the Order of the Acting Minister

of National Economy of the Republic of Kazakhstan dated March 27, 2015, No. 272.

4.4 Land Plot Right Registration for the Construction of RE Facilities

This section describes the procedures for obtaining the right to temporary land use. Below is a scheme of the land plot procedure:





Figure 2. General Procedure for Obtaining the Right to Land Use

The overall timeframe for reviewing the application for the provision of the land plot rights is up to two months from the date of its receipt. The specified period does not include the time:

- ✓ Required for the preparation of the land use design
- ✓ For land allocation coordination²⁴

²⁴ According to Paragraph 6 of Article 44 of the Land Code, if there are residential buildings, other buildings and structures on the territory chosen for the construction of the facility, as well as utilities and green plantations subject to demolition or relocation (including those that turn out to be a part of the sanitary-protective zone of industrial enterprises after land allocation), the applicant shall obtain the approvals required for the allocation of the land plot independently. The applicant submits a loss

- ✓ For land delineation in the field

To obtain the right to a land plot,²⁵ the investor sends the application in accordance with the form given in [Annex 7](#) to the LEA (of regions, cities of the republican significance, the capital, districts, cities of regional significance, mayors of the cities of district significance, towns, villages, and rural districts within the scope of

compensation contract concluded with each of the owners of the real estate. The contract specifies the specific conditions and terms for resettlement, relocation of the existing buildings, utilities, green plantations, and the developer's obligation to compensate for all losses associated with the demolition of the real estate.

²⁵ The procedure for land plots registration is given in Art. 43-44-1 of the Land Code

their competence) that has jurisdiction over the territory where the land plot in question is located.

The application for the provision of the land plot rights is delivered to the authorized bodies that have jurisdiction over the land plot's location within 3 working days in order to determine whether the land plot in question will be used for the purpose specified in the application in accordance with land zoning.

According to Paragraph 2, Article 43 of the LC RK, the decision to grant the land plot is made based on a positive decision of the Land Commission and the land use design.

The Land Commission operates on permanent basis. The members of the Land Commission are chosen by the LEA of the region, cities of republican significance, the capital, the district, or the cities of regional significance and is sent for approval to the appropriate local representative body. The Land Commission members include:

- ✓ Members of the local representative body
- ✓ Representatives of the authorized body of the region, city of the republican significance, the capital, the district, city of the regional significance, and the subdivisions of the relevant local executive authorities in the fields of architecture, urban planning and agriculture
- ✓ Representatives of public councils, agribusiness and other industry-specific non-governmental organizations, and local self-government bodies
- ✓ Representatives of the National Chamber of Entrepreneurs of the Republic of Kazakhstan

The decision of the Commission shall be issued in triplicate in the form of a protocol decision within 5 working days from the date the authorized body submits to the Commission a proposal to use the land plot in question for the purpose specified in the application, in accordance with land zoning, or the information on the pre-selected land plot (when the land plot is going to be used for the construction of facilities, except for the construction of facilities within the limits of a settlement).

One copy of the positive decision of the Commission is given to the applicant within 5 working days for the preparation of the land use design.²⁶

The decision of the LEA of the region, city of the republican significance, the capital, the district, city of the regional significance, or the mayor of the city of the district significance, town, village, or rural district to refuse to grant the land plot is made on the basis of a negative decision of the Commission within 7 working days from the date the Land Commission made the decision. The refusal to grant the land plot shall be

substantiated.

The decision of the Land Commission documented in the minutes can be appealed to the court. Petitioning to the court suspends the execution of the documented decision of the Land Commission. A positive decision of the Land Commission is valid for one year from the date of its adoption according to paragraph 2 of Article 43 of the LC RK. The expiry of the one-year period is the basis for the LEA's decision on the refusal to grant the land plot rights.

Development and Approval of the Land Use Design

The customer can independently choose the organization for land use design development or approach the NPCzem (Scientific and Production Center of the Land Cadaster) and sign a contract with it for land use design development. The Order of the Minister of National Economy of the Republic of Kazakhstan dated May 6, 2015, No. 379 approves the Rules for Land Surveying for the Development of Land Use Design. As part of the land use design development, the developer of the land use design confirms the area of the land plot, its boundaries and location, adjacent land owners and land users, as well as the presence of encumbrances and easements for the plot.

In the event of assumed land plot withdrawal, forcible alienation for the state needs, the land use design shall be attached with the calculations of the potential losses of the land plot's owners and users (tenants), and losses of agricultural and forestry production, depending on the type of land.

After a proper coordination procedure, the land use design documentation is approved by the authorized body (Land Relations Office) with jurisdiction over the land plot's location within 7 working days at the location of the land lot.

The decision of the LEA of the region, city of the republican significance, the capital, the district, city of the regional significance, or the mayor of the city of the district significance, town, village, or rural district on granting the right to the land plot is made within 7 working days after the receipt of the land use design approved by the relevant authorized body of the region, city of the republican significance, the capital, the district, or the city of the regional significance.

A copy of the LEA decision on granting or refusing to grant the relevant rights to land plots is given (sent) to the applicant within 5 working days from the date of the decision.

In cases where the decision on the granting of land plots is within the competence of the superior executive body, the mayor's office sends the land use

²⁶ According to Paragraph 2, Article 43 of the Land Code of RK.

case with its decision to the superior body for a final decision.

The draft decision of the LEA of the region, city of the republican significance, the capital, the district, city of the regional significance, or the mayor of the city of the district significance, town, village, or rural district on granting the right to the land plot must contain:

- ✓ The name of the legal entity or individual that receives the right to the land
- ✓ Intended use of the land plot
- ✓ Land plot area, type of land right, encumbrances, easements, the buyback price of the land plot or the land use right if the land plot is provided in return for a fee, the terms and conditions of the land plot purchase and sale contracts
- ✓ Surname, name, patronymic (if any) of the individual or the name of the legal entity that the land is withheld from, alienated for state needs, indicating their size, information on the divisibility (indivisibility) of the plot, and other conditions

The temporary (short-term, long-term) non-gratuitous (gratuitous) land use contract is concluded by the authorized body of the region, city of the republican significance, the capital, the district, or city of the regional significance based on the decision to grant the right to the land plot within 10 working days from the date of the decision.

The delineation of the land plot in the field is done by the developer of the land use design in accordance with the legislation.²⁷ The implementation of the land survey projects includes implementation of the design on the land.

One copy of the land use design documentation needed to produce the identification document is submitted to the PSC after the completion of the land survey work. The reliability of information on the land plots contained in the land use design documentation is ensured by the authorized bodies that approved the land use design documentation.

After the lease agreement and other documents are submitted, the identification document for the land plot is issued:

- ✓ The deadline for preparing the identification document is 6 working days.

- ✓ The cost of service is based on the area of the land plot and the size of the monthly calculated index for a corresponding financial year.
- ✓ The service can be provided via both the PSC and the egov.kz portal.²⁸

Further, for state registration²⁹ of the land plot rights, the customer needs to approach the PSC responsible for the area where the land plot is located or receive the service via the egov.kz portal.

The procedure for receiving the service and the list of required documents is described in [Annex 8](#).

The procedure for registering the land plot rights, established by Article 44 of the Land Code, differs from the procedure for land plot rights registration for the construction of facilities within the limits of a settlement, established by Article 44-1 of the Land Code. It involves obtaining approval for a pre-selected land plot via state information systems or via hard copies if the consent-giving authorities do not have such information systems, as well as the compilation of a land cadaster plan.

The process of obtaining the land plot for the construction of a renewable energy facility within the limits of a settlement consists of the following stages:

1. Submission of the application according to the form given in [Annex 9](#), to the LEA of the region, city of the republican significance, the capital, the district, city of the regional significance, the mayor of the city of the district significance, town, village, or rural district, that has jurisdiction over the location of the land plot via the web portal egov.kz or via the PSC.³⁰
2. The application is sent to a subdivision of the corresponding LEA (Architecture and Urban Planning Office) that has jurisdiction over the location of the land plot within 1 working day.
3. The Architecture and Urban Planning Office selects the land plot using its situation diagram and sends it for approval simultaneously to all concerned state bodies, relevant services and the PSC responsible for the maintenance of the state land cadaster within 7 working days.

If the land plot is occupied, the PSC sends the relevant information to the Architecture and Urban Planning Office within 3 working days. Then the Office issues a refusal to grant the right to the

²⁷ The Order of the Chairman of the Land Resources Management Agency of the Republic of Kazakhstan dated September 7, 2004, No. 72-P-a, On Approval of the Rules for Land Surveying Works in the Republic of Kazakhstan for the Development of Inter-Farm Land Use Design, Creation and Streamlining of Existing Land Use, Allocation and Delineation of Land Plots in the Field.

²⁸ For notarized transactions the public service is provided by notaries via ENIS (the Single Notary Information System) and by sending an electronic copy of the title deed to the information system of the legal cadaster.

²⁹ The procedure for state registration of the land plot rights is established by the Public Service Standard - State Registration of Rights (Encumbrances) to Immovable Property, Appendix I to Order No. 246 of the Minister of Justice of the Republic of Kazakhstan dated April 28, 2015.

³⁰ The standard of the public service, Provision of Land Plot for the Construction of a Facility within the Limits of a Settlement, approved by the order of the acting Minister of National Economy of the Republic of Kazakhstan dated March 27, 2015, No. 270.

land plot in the form of a decision and sends it to the applicant within 3 working days.

4. The consent-giving bodies decide on granting the land plot for the intended use specified in the application within 12 working days.
5. The Architecture and Urban Planning Office prepares and sends the final land plot selection act within 5 working days.
6. Architecture and Urban Planning Office agrees on the final land plot selection with the applicant by sending a notification via the web portal egov.kz or the PSC.
7. The applicant agrees on the final land plot selection (the validity of the unapproved land plot selection act is 10 working days) and pays for land-cadastral services within 3 working days.
8. The applicant is given notice on the date of the receipt of the temporary land use contract for signature.
9. The signed materials are sent to the PSC for the preparation of the land cadaster plan.
10. The land cadastral plan is sent to the authorized body of the region, city of the republican significance, the capital, the district, or city of the regional significance within 10 working days for the preparation of the draft decision of the LEA of the region, city of the republican significance, the capital, the district, city of the regional significance, the mayor of the city of regional significance, town, village, or rural district on granting the right to the land plot.
11. Approval of the land cadastral plan is granted within 3 working days.
12. Delineation of the land plot in the field is made within one month.
13. The decision of the LEA of the region, city of the republican significance, the capital, the district, city of the regional significance, the mayor of the city of regional significance, town, village, or rural district on granting the right to the land plot within 5 working days after the approval of the land-cadastral plan.
14. Temporary use contract is signed within 3 working days.
15. After receiving the documents confirming the right to the land plot, the applicant submits an application for state registration of rights to immovable property in accordance with the legislation of the Republic of Kazakhstan.³¹

4.5 Special Water Use Permit

In the case of the development of a hydropower plant (HPP), the developer must obtain the right for water use. This right is granted to individuals or legal entities in accordance with special, stand-alone or joint use procedures established by the water legislation of the Republic of Kazakhstan.

Individuals and legal entities are granted the rights to water bodies for:

- ✓ Short-term use: up to 5 years
- ✓ Long-term use: from 5 to 49 years

Individual and legal entities who are granted water bodies for use cannot dispose of the right to use water bodies. Special water use is carried out by individuals and legal entities based on a permit and solely for the purposes defined therein. These persons must not violate the rights and legitimate interests of others or cause harm to the environment.

The permit for special water use is provided by the Catchment Authorities of the Ministry of Agriculture of the Republic of Kazakhstan (MoA RK). These authorities issue, suspend and revoke permits for special water use in the manner and on the grounds established by the laws of the Republic of Kazakhstan.

To obtain a permit for special water use, the applicant submits the following documents to the regional branches of the authorized body:

- ✓ Application for a permit according to the form given in *Annex 10*
- ✓ Certificate of state registration (re-registration) of a legal entity
- ✓ ID of the water facility, irrigation and drainage systems or devices
- ✓ A copy of the certificate of registration with the tax authority or a copy of the certificate of state registration as an individual entrepreneur
- ✓ Calculations of the specific norms of water consumption and water discharge, except for individuals or legal entities that withdraw water resources for water treatment and/or delivery to water users for drinking needs, activities to regulate surface runoff with the help of retaining hydro technical facilities, use of water bodies without withdrawing water resources from them, discharging incidentally taken underground water (mine, pit), which present calculations for justifying the volumes of water consumption and water discharge

³¹ Article 20 of the Law of the Republic of Kazakhstan as of July 26, 2007 No. 310-III, On State Registration of Rights to Immovable Property.

- ✓ Sanitary and epidemiological decision on compliance of surface and/or ground water intake for drinking water supply with sanitary and epidemiological requirements
- ✓ The list of secondary water users with applications for the supply or receipt of waste water
- ✓ Information on the availability of water intake meters

HPP project developers shall provide additional information along with the application:

- ✓ HPP installed capacity
- ✓ Information on the capacity of energy, discharge and other structures
- ✓ Information about fish protection and fish access structures
- ✓ Data on the proposed amount of water resources to be used for hydropower needs

A permit for special water use is issued by the regional branches of the authorized body not later than 24 working days from the date of submission of the application with all the necessary documents in accordance with the Water Code of the Republic of Kazakhstan.

The procedure for carrying out work at water bodies and their water protection zones is determined for each water body separately, taking into account its condition and the requirements for preserving the environment as agreed with the authorized body, authorized state body for environmental protection, the authorized body for sanitary and epidemiological welfare of the population, LEAs (of regions, cities of republican significance, the capital) and other concerned state bodies at the feasibility study stage, and during the design and preparation of estimates documentation.



5. GRID CONNECTION PROCEDURE

The Law of the Republic of Kazakhstan on Support for the Use of RES creates an obligation for energy transmitting organizations to ensure unimpeded and non-discriminatory determination of the closest

electric network connection point that corresponds to the voltage class and to ensure connection of RE facilities.³² This section presents the main stages, procedure and timeframe for connecting renewable energy facilities to the grid.

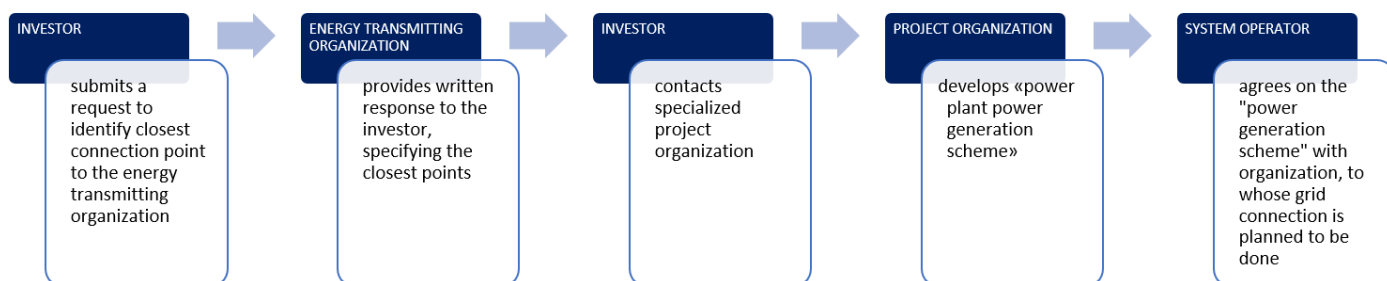


Figure 3. Procedure for Identifying the Closest Connection Point and Developing the Power Plant Power Generation Scheme

5.1 Identifying the Closest Grid Connection Point and Development of Power Distribution Scheme

The closest grid connection point is the closest point of physical connection of the generating company's power installation that uses RES with the power grid of the energy transmitting organization of a corresponding voltage class.

The procedure for identifying the closest connection point and developing a power plant power generation scheme is:

- I. An investor submits a request to the energy transmitting organization to identify the closest technically feasible connection point for the RE facility. The request to identify the closest connection point contains the following information:
 - ✓ Name and type of installation
 - ✓ Preferred location of the site (list of alternative locations for the units with the identification of their preliminary location on a map)

³² Paragraph 2, Article 10 of The Law of the Republic of Kazakhstan on Support for the Use of RES.

- ✓ Permissible power transmission of the whole installation (maximum in megawatts, specifying cos and/or in megawatt (MW) or megavolt-amperes (MVA))
 - ✓ Expected output (MWh per month)
 - ✓ Expected energy consumption of the auxiliary system, including reactive power
 - ✓ Installation configuration
 - ✓ Nature of any disturbing load
 - ✓ Technology used by the proposed power installation
 - ✓ Date of expected commissioning
 - ✓ Minimal generation of active power in MW
 - ✓ Nominal values in MVA, transient reactance on a direct axis, short-circuit ratio, inertia constant of the power installation with synchronous generators (engines)
 - ✓ Nominal values in MVA of the step-up transformer and positive phase-sequence reactance (for max/min branches)
 - ✓ Type and category of the exciter
2. The energy transmitting organization will notify the investor within 15 days upon receipt of the request in writing about the possible closest grid connection points for consideration in the power generation scheme of the power plant.³³
 3. An investor turns to the specialized design organization, which has a license for design activities, which then develops a power generation scheme of the power plant, containing the diagram for the renewable energy facility's connection to electric networks (for facilities over 5 MW).

The **power generation scheme** of the power plant contains the following:

- ✓ Overview of the current electric energy supply state in the region in question and prospects for the next 3(5)-10 years
 - ✓ Power and energy balances of the region in question (current state and prospects for 3(5)-10 years), identification of the location for reserves placement to cover for fluctuations in RES generation, their capacity and flexibility, and data on multi-annual meteorological observations, taking into account seasonal changes, the balances
4. The power plant power generation scheme must be approved by system operator (KEGOC JSC) with the relevant organization (the power transmitter or power generator), to the grids of which the connection is planned

The legislation of the Republic of Kazakhstan establishes administrative responsibility for violating the RES support laws,³⁴ including violations of

³³ The power plant power generation scheme is a section of the preliminary project documentation for constructing new or changing existing (reconstruction, expansion, technical re-equipment, modernization, overhaul) energy installations. It is developed in line with the power industry legislation of the Republic of Kazakhstan.

³⁴ Code on administrative offences of the RK, Article 303. Violation of the legislation of the Republic of Kazakhstan on Support for the Use of RES:
1. Failure to fulfill and/or improper fulfillment of the obligation to buy electric or heating energy generated by installations using RES entails a fine:

procedures and timeframes for identifying the closest connection point to the grid for the RES installations.

5.2 Obtaining Technical Specifications

Based on the approved power generation scheme, the grid company to which the power plant is to be connected issues technical specifications (TS) for a connection to the electric network. The procedure for obtaining TS for a connection to the electric grid of the energy transmitting organization is:

1. Send a request to the grid company to connect generating installations to the grid. The requirements set for the contents of the power generation scheme are specified in the Order of the Minister of Energy of the Republic of Kazakhstan dated December 18, 2014, No. 210, On approval of the Grid Rules.
2. The timeframe for issue of the TS is no more than 2 calendar months after the day the grid user makes a request. No payment is levied for issuing or reissuing the TS.

The TS includes the following information:

- ✓ Last name, name and patronymics (if any) of the individual or name of the legal entity to which the TS is issued
- ✓ Name of the electric power generating facility
- ✓ Location of the facility (city, village, street)
- ✓ Agreed power plant capacity
- ✓ Nature of energy generation (continuous, temporary, seasonal)
- ✓ Category of energy supply reliability
- ✓ Permissible power factor of the plant
- ✓ Connection points (substation, power plant or power transmission line), specifying the connection scheme (input-output scheme, branch of the power transmission line, connection to the switchgear bus bar of the substation or power plant)
- ✓ Main technical requirements to the connected power transmission lines and substation equipment
- ✓ Justified requirements to strengthen the grid due to the introduction of a new power plant – increase of the wire section, replacement or increase of transformer capacity, construction of additional cells of switching gear
- ✓ Reason for issuing TS

- ✓ TS validity period
- ✓ Requirements for organization of commercial metering of energy, using ACEMS
- ✓ Requirements for equipping the power plant with relay protection and automation equipment, dispatch control: telemetering, remote control and organization of communication channels
- ✓ Requirements for compensation of reactive power

If the investor disagrees with the requirements specified in the TS, he can go to an expert organization to conduct an energy expert assessment. If an expert organization contacts the energy transmitting (energy generating) organization on behalf of the investor, the energy transmitting (energy generating) organization will provide all requested information within the scope relevant for this grid user.

Based on the opinion of energy expert based on an examination of insufficient justification of the requirements specified in the TS, the investor resubmits a request for the TS to the energy transmitting (energy generating) organization. In case of repeated rejection to change the requirements specified in the TS, the investor has a right to appeal the actions of the energy transmitting (generating) organization following the procedure specified in the legislation of the Republic of Kazakhstan.

The TS duration period complies with the regular design and construction timeframe for a power plant. The TS for the facilities where construction has started can be extended based on a request of the power plant owner, which must be submitted before the TS expires.

The validity period of TS for connection is no less than the time needed for preliminary project studies, design and construction of the renewable energy facilities, as identified by current design and construction norms, and should not exceed 3 years. In line with point 1 of paragraph 7 of the Rules on Approval of the Standard Form Contract for Connection of Renewable Energy Facilities to the Grid, as well as Rules for Concluding the Contract, approved by the order of the acting Minister of Energy of the Republic of Kazakhstan dated July 27, 2016, No. 343, the energy transmitting organization has the right to a one-time extension of the duration of the validity of technical specifications for a period up to one calendar year, upon the request of the energy generating organization, provided the request is submitted before the expiration date of the TS.

The investor finances all activities under the TS. The

100 monthly calculation indices (MCI) for small businesses, 200 MCI for medium businesses, and 1500 MCI for large businesses.

2. Violation of the procedure or timeframe for the identification of the nearest connection point to electric or heating grid and the connection of RES installation entails a fine: 100 MCI for small businesses, 200 MCI for medium businesses, and 1500 MCI for large businesses.

3. The actions stipulated in paragraphs 1 and 2 of this article that are repeated within a year after the imposition of an administrative penalty will entail a fine of 150 for small businesses, 350 MCI for medium businesses, and 2000 MCI for large businesses.

costs related to constructing the grid from the renewable energy facility to the transmitting organization's grid connection point, connection to the grid, energy transmission from the renewable energy facility to the connection point to the grid, and metering of the energy supplied are covered by the owner of the renewable energy facility.³⁵

After fulfilling the TS requirements and completing the construction of the power plant, comprehensive tests of the power plant are performed in line with the connection and power generation scheme. According to Paragraph 2-1 of Article 9 of the Law of the Republic of Kazakhstan On Electric Energy, a comprehensive test program must be agreed upon by the grid operator (KEGOC JSC).

5.3 Signing Standard Form Agreement on Connection of RE Facilities

The energy generating and transmitting organizations must sign a standard form contract on the renewable energy facility's connection to the grid, as specified in Annex 11³⁶ following the required procedure and timeframe.

Main Content of the Contract on Connection of RE Facilities

The energy transmitting organization shall provide grid access to the energy generating organization by providing the grid connection point in line with technical specifications.

The energy generating organization shall fully comply with technical specifications and will ensure the commissioning of the renewable energy facility within the validity period of the technical specifications.

The **energy generating organization** must:

- ✓ Fulfill all requirements of the technical specifications on time
- ✓ Before the comprehensive tests, sign a contract with the grid operator on the technical dispatching services for supply to the grid and consumption of electric energy
- ✓ Before the comprehensive tests, sign a contract with a client on electricity purchase and sale
- ✓ Before the comprehensive tests, sign a contract with the energy transmitting organization on the provision of energy transmission services

- ✓ After satisfying the requirements of the technical specifications, conduct comprehensive tests of the renewable energy facility

The **energy transmitting organization** must:

- ✓ Reserve the grid connection point to the generating organization until the end of the technical specifications' validity period
- ✓ Within 30 (thirty) calendar days after the request is submitted, give permission to connect the renewable energy facility's generation capacity to the grid, provided the agreement conditions are satisfied in full

The **energy transmitting organization** has a right to:

- ✓ Refuse the connection to the grid if the technical specifications are not fulfilled
- ✓ Extend once the validity period of technical specifications within less than one calendar year
- ✓ Amend the TS if there are changes in the legislation of the Republic of Kazakhstan with advanced written notice to the energy generating organization

The agreement is valid until the end of the term of validity of the technical specifications or before the signing of the act on connection to the electric grid, but not later than the deadline for the submission of the act on acceptance for the operation of the renewable energy facility specified in the agreement for the purchase of electric energy by the financial settlement center from the energy producing organization, depending on which one is earlier. Information on the agreement is confidential. In the event of an extension of the term of the technical specifications in accordance with the terms of the agreement for connection to the grid, the parties shall draw up an additional agreement to the agreement on connection to the grid. Non-fulfillment or improper performance of the terms of the agreement shall entail termination under the laws of the Republic of Kazakhstan.

The Procedure for Concluding a Standard Form Contract to Connect RE facilities:³⁷

- I. The energy generating organization sends a request to sign the contract within 30 (thirty) days after the facility was included in the renewable energy facility's siting plan. The following is attached to the request:

³⁵ Paragraph, Article 10 of the Law of the Republic of Kazakhstan for the Support of RES.

³⁶ Order of the acting Minister of Energy of the Republic of Kazakhstan dated July 27, 2016, No. 343, On Approval of the Standard Form Contract for the Connection of RE Facilities to the Grid, as well as Rules for Concluding the Contract.

³⁷ Rules for the Connection of Renewable Energy Facilities to the Grid, Annex 2 to the Order of the Acting Minister of Energy of the Republic of Kazakhstan dated July 27, 2016, No. 343.

- ✓ Charter documents of the energy generating organization
 - ✓ Technical specifications for connection to the grid
 - ✓ Power plant power generation scheme
 - ✓ Copies of letters from the energy transmitting organization and system operator agreeing on the power plant power generation scheme.
2. The energy transmitting organization considers the request and documents within 10 (ten) business days. If the documents do not comply, the organization sends a notification within 2 (two) days.
 3. The energy generating organization provides documents within 10 (ten) business days from the date of receiving notification.
 4. The contract is concluded within 30 calendar days after the provision of the complete set of documents.

5.4 Signing a Technical Dispatching Agreement

The system operator provides technical dispatching based on a standard form contract on service rendering for technical dispatching of release to the network and consumption of electric energy in line with [Annex 12](#).³⁸ The energy generating organization has to sign a contract for technical dispatching before the start of comprehensive tests and obtaining access to the grid.

Parties to the contract: The *consumer* of the technical dispatching services – energy producing, energy supply, or energy transmitting organization – as well as the legal entity supplying (importing) energy from abroad to the Republic of Kazakhstan. *Supplier* – system operator, which provides technical dispatching services.

The contract regulates the following matters:

- ✓ Ensuring technical dispatching for the supply of energy to the grid and parallel operation of energy installations of the consumer of the services as a component of a single electric energy system of the Republic of Kazakhstan
- ✓ Technical specifications and characteristics of the technical dispatching services
- ✓ Conditions for provision of technical dispatching
- ✓ Metering of the energy supplied
- ✓ Rights and responsibilities of the parties
- ✓ Payment procedure for dispatching services

- ✓ Liabilities of the parties, force majeure and other provisions

Main Rights and Responsibilities of the Parties

The **supplier** has a right to:

- ✓ Change the approved 24-hour schedule of electric energy generation, provided that electrical supply to network is within agreed amounts in the end of the billing period (Subject to the agreement with the consumer of the RES services)
- ✓ To conduct switching in the electric switchgear of the consumer to start maintenance of high-voltage line equipment), start operations or eliminate disturbances

The **supplier** must:

- ✓ Avoid interruptions in service provision that are not stipulated in the contract, stopping or limiting technical dispatching of supply to the grid
- ✓ Ensure the reliability of parallel operation of the service consumer as part of a single energy grid of the Republic of Kazakhstan, including by means of emergency control at the facilities of the consumer and third parties
- ✓ Inform the consumer in a timely manner about the reasons for faults in normal operation of the single energy grid of the Republic of Kazakhstan

The **consumer** has a right to:

- ✓ require the supplier to fulfill its obligations under the contract
- ✓ contest his actions in line with the legislation of the Republic of Kazakhstan

The **consumer** must:

- ✓ Ensure the proper technical condition of the switchgear, emergency control automation, equipment and commercial energy metering devices
- ✓ Comply with the regulatory requirements, aimed at maintaining the standard frequency of electric energy in a single electric grid of the Republic of Kazakhstan
- ✓ Comply with the requirements of the National Dispatch Center of the System Operator (NDC SO) and regional dispatch center (RDC)
- ✓ Ensure proper energy metering
- ✓ Organize the transmission of telemetric information on the supply of energy to the grid to the NDC SO and RDC

³⁸ Standard form contract for technical dispatching services provision for supply to the grid and consumption of energy, approved by the Order of the Minister of National Economy dated March 27, 2015, No. 266.

5.5 Signing a Standard Form Contract for the Transmission and/or Distribution of Electric Energy

An energy generating organization is obliged to conclude a contract with the energy transmission organization for the transmission of electric energy before the beginning of comprehensive tests and access to electric grids.

Signing a Contract with the Regional Grid Company

In the event that the electrical grid to which the nearest point is to be connected belongs to regional electric grid companies, the energy generating organization undertakes to conclude a contract for the services of transmission and/or distribution of electric energy with these companies in accordance with the standard form contract, approved by the Order of the Minister of National Economy of the Republic of Kazakhstan dated March 27, 2015, No. 266 (Appendix II to the Order).

The standard form contract for the transmission or distribution of electric energy. Main provisions

Parties to the contract: Consumer – individual or legal entity that uses or intends to use the energy transmission and/or distribution services. *Supplier* – organization that provides services on energy transmission and/or distribution in the grid.

The contract regulates the following matters:

- ✓ Technical specifications and characteristics for the provision of services on energy transmission and/or distribution from the reception station through the grid, substations and switchgear of the supplier up to the boundary of balance sheet attribution of the consumer
- ✓ Energy metering
- ✓ Rights and responsibilities of the parties
- ✓ Financial settlement procedure
- ✓ Liabilities of the parties, force majeure and dispute resolution

Terms of service. Electricity is transmitted and/or distributed based on and in accordance with the annual application of the volumes of transmission of electric energy of the consumer with a breakdown by quarters and months, taking into account possible adjustments. Proposals for adjustments are promptly agreed by the parties at least 1 (one) day before the change begins. A deviation of the actual volume from the declared volume is allowable by 10% downward for the billing period.

Electrical energy metering. The actual volume of electric energy transmitted and/or distributed by the supplier for the billing period at the delivery points is

determined from 00:00 hours of the first calendar day to 24:00 hours of the last calendar day of the accounting period on the basis of indications of commercial metering devices installed at the borders of the balance sheet attribution. This is confirmed by the reconciliation report on volumes, which are compiled based on indications of commercial metering devices. When the supplier finds violations in the scheme of electrical energy metering, damage to the equipment used for commercial metering, the supplier disconnects the consumer from the electric grid and/or recalculates the volume of electricity transmitted to the consumer.

Main rights and responsibilities of the parties.

The supplier has the right to terminate or suspend the execution of the contract in connection with the non-payment by the consumer for the energy used; to stop supplying electricity to the consumer in case of an emergency. The supplier is obliged not to allow interruptions in the transmission and/or distribution of electrical energy.

The consumer has the right to demand compensation from the supplier for damages caused by the termination of the transmission and/or distribution of electric energy, as a result of a shortage or delivery that does not meet the standard parameters of electrical energy.

Settlement procedure. The consumer pays for the services of the supplier that transmits and/or distributes electric energy at tariffs approved by the authorized body. At the same time, the consumer is exempted from paying for electricity transmitted through the national grid in accordance with Clause 7 of Article 9 of the Law of the Republic of Kazakhstan on Supporting the Use of RES.

Liabilities of the Parties. In the case of a reduction in the agreed monthly volume of the transmission and/or distribution of electric energy for the billing period when the supplier is at fault, the supplier replaces the unsupplied volumes from any sources. Otherwise, the consumer has the right to impose a fine in the amount of the cost of the transmission and/or distribution of electrical energy, based on the amount of unsupplied electrical energy.

If the energy generating organization supplies less power than stipulated by the contract, the supplier limits the generation transmitted to the Consumer in an amount that is balanced with the seller's output.

Responsibility for the consequences arising from limitation or disconnection due to non-payment or untimely payment, as well as non-delivery of energy/capacity by an energy generating organization falls entirely on the consumer. At the same time, the entire responsibility for the possible consequences of disconnection of the consumer, including the facilities

of continuous energy supply, is borne by the consumer.

Signing a Contract with KEGOC

In the event that the electric grid to which the nearest point is connected is part of the national grid of the Republic of Kazakhstan, the energy generator undertakes to enter into a contract for the provision of electricity transmission and/or distribution services with KEGOC JSC in accordance with a standard agreement approved by Order No. 266 of the Minister of National Economy of the Republic of Kazakhstan dated March 27, 2015 (Appendix 2 to the Order).

The general provisions of the standard form contract for the provision of services on the transmission of electric energy in the national energy grid are:

Parties to the contract: Consumer – actor on the wholesale market, which has signed a bilateral purchase-sale transaction on electric energy with its supply during a certain period (week, month, quarter, year). Supplier – system operator, who transmits electric energy through the national grid.

The contract regulates the following matters:

- ✓ Receiving electric energy at the boundary of balance sheet attribution at the receiving stations and energy transmission in the grid to the delivery points
- ✓ Conditions for transmission of electric energy
- ✓ Electric energy metering
- ✓ Rights and responsibilities of the parties
- ✓ Payment procedure
- ✓ Liability of the parties, force majeure, other provisions and dispute resolution

Terms for transmission of electrical energy.

Electrical energy is transmitted based on and in accordance with the quarterly or monthly application, subject to possible adjustments. A monthly application for the upcoming billing period shall be submitted no later than 10 calendar days before the beginning of the corresponding billing period. Adjustment of the monthly volume is allowed only within the limits of the contractual quarterly volume of electricity transmission. The monthly and quarterly application is submitted by the consumer to the supplier by fax.

Electric energy metering. The actual volume of electricity transmitted by the supplier to the Consumer's address for the billing period at the delivery points is determined from 00:00 hours of the first calendar day to 24:00 hours of the last calendar day of the billing period on the basis of measurements of commercial metering devices installed at the boundaries of the balance sheet attribution, and is confirmed by a reconciliation report on the volumes of the electric energy transmitted, which is compiled on

the basis of acts of reconciliation of the readings on commercial metering devices. If a violation is detected in the metering scheme, an appropriate act is compiled, in which all violations are recorded. In this case, the amount of electric energy transmitted by the supplier to the consumer is determined at the end of the billing period based on the actual balance of electricity. Here, an appropriate certificate is drawn up and signed by the parties.

Main rights and responsibilities of the parties.

The supplier has the right to transmit electrical energy in the amount necessary for the facilities to provide a continuous power supply to the consumer in accordance with the Emergency Reservation Act, taking into account the bank's or the Treasury's (regional financial management) guarantee obligations on the basis of a separate agreement to the contract. The supplier has the right to perform other actions, including limiting or completely stopping the transmission of electrical energy to the consumer in specified cases. The supplier cannot allow non-contractual breaks in the transmission of electricity.

The consumer has the right to demand compensation from the supplier for the damage caused by an insufficient or low-quality electricity supply due to the fault of the supplier in accordance with the terms of the concluded contracts.

Payment procedure. Payment for the services of the supplier for the transmission of electric energy through the national electric grid is made in accordance with the tariff approved by the office of the authorized body.

At the same time, the consumer is exempted from the payment of the supplier's services for the transmission of electric power through the national grid in accordance with Clause 7 of Article 9 of the Law of the Republic of Kazakhstan on Supporting RES.

Liability of the parties. In case of a reduction of the agreed monthly volume of transmission of electric energy for the billing period, due to the fault of the supplier, the latter replaces the unsupplied volumes from any sources. Otherwise, the consumer has the right to impose a fine in the amount of the cost of the transmission and/or distribution of electrical energy, based on the amount of unsupplied electrical energy.

If the energy generating organization supplies less power than stipulated by the contract to the consumer, the supplier limits the generation transmitted to the consumer in an amount that is balanced with the seller's output.

Responsibility for consequences arising from the limitation or disconnection due to non-payment or untimely payment, as well as non-delivery of energy/capacity by an energy generating organization falls entirely on the consumer.

The supplier shall not be liable to the consumer for the

interruption, termination or restriction of the transmission of electric energy caused by the triggering of the emergency control system at the levels and in the amounts set by the National Dispatch Center of the system operator (regional dispatch center).

The liability of the supplier before the consumer for the interruption, termination or restriction of the transmission of electric energy not provided for by the contract is determined in accordance with the legislation of the Republic of Kazakhstan.

5.6 Operational Regulations

Sustainable operation shall be ensured for renewable energy generating installations (REGI) (without automatic disconnection from the grid) if the frequency deviates in the grid from the nominal value within the minimal periods of time when the generating module should be working without disconnection from the grid.

In case the network frequency deviates from the nominal value, the REGI must not be automatically disconnected because of the deviation within the frequency ranges of the minimum time periods during which the generating unit must be able to operate without disconnection from the grid.

Broader frequency ranges or longer minimum operating time periods can be negotiated with the system operator and described in the rules of technical operation of the power plants, grid regulations, and technical specifications for connection to the grid in order to optimize the use of the technical capabilities of the REGI when it is necessary to maintain or restore the reliability of the system.

The REGI should be able to disconnect automatically at a certain frequency at the request of the system operator. The conditions for automatic disconnection shall be defined by the system operator in the technical specifications for connection to the grid.

The REGI shall provide for a stable power output when the frequency goes down until the thermal power plants are disconnected by the action of the frequency range system. Frequency ranges for REGI shall be specified at the design stage to maintain the efficiency of under-frequency load shedding.

The REGI shall be equipped with automatic systems to control active power generation, which allows wind farms to participate in the primary frequency control (in case of frequency deviation in the grid, both below and above the relative nominal value). The settings for the automatic systems shall be agreed upon with the system operator, the automatic systems shall be put into operation at the direction of the system operator.

The REGI shall remain connected to the grid when the line (phase-to-phase) voltage at the grid connection

point drops due to asynchronous running in the adjacent grid or due to nearby short circuits (symmetrical or asymmetrical). At the same time, the respective stable operation conditions for a wind power plant are defined based on the "voltage-time" parameter indicated in Figure 4.

The REGI shall provide black start capability. At the same time, it shall be possible to synchronize the REGI with the grid within the frequencies of the minimum time periods in which the generating unit must be able to operate without disconnection from the grid as defined in Table 5.

The REGI shall provide for an isolated operation ability with dedicated load. At the same time, isolated operation shall be possible within the frequency ranges and time periods indicated above.

The REGI shall be equipped with automatic systems that regulate the generation of reactive power:

- ✓ In voltage control mode
- ✓ In reactive power control mode
- ✓ In power factor adjustment mode

The system operator shall determine which of the above control modes is feasible.

The REGI shall provide the reactive power control range within the limits specified in Figure 5. When the voltage at the connection point goes below (or above) the limits specified in Figure 6, the REGI shall operate in the mode of maximum generation (or maximum consumption) of reactive power.

Requirements for the REGI measurement and control equipment:

- ✓ The REGI shall be equipped with the appropriate equipment, which records plant automatic systems operations, records faults and monitors transients, regulates the dynamic system and (measures), and records the following parameters: voltage, active power, reactive power, frequency, wind speed, ambient temperature, and power quality.
- ✓ Parameters of emergency registering equipment, including activation criteria and measurement frequency, are set by the system operator in the technical specifications for connection to the grid.
- ✓ Dynamic system control equipment and power supply quality control equipment shall enable the system operator's access to information. The data transfer protocol is agreed upon with the system operator in technical specifications for connection, grid regulations or in any other bilateral agreements.

During the approval stage of a REGI project, the system operator is presented with the REGI simulation model, as well as calculations performed in the simulation

model that demonstrate the compliance of the REGI with the requirements of the electric power sector legislation of the Republic of Kazakhstan.

The simulation model is presented in the format defined by the system operator.

Table 6. Minimal Operational Time Periods without Disconnection from the Grid

Frequency range (Hz)	Minimum operation time
47-49	120 min
49-51	Not limited
51-51,5	90 min

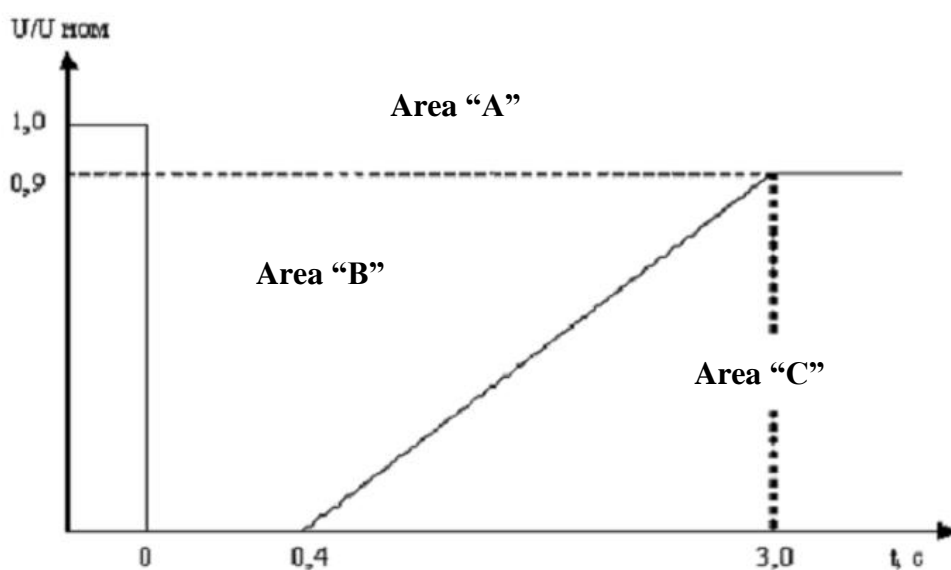


Figure 4. Characteristics for Sustainable Work of WPPs are Specified by the “Voltage-Time” Characteristic

Area «A» – the REGI shall stay connected to the grid with sustainable operation. Area «B» – the REGI shall stay connected to the grid and ensure maximum support of the voltage by generating a controlled amount of reactive power. Area «C» – disconnection of REGI from the grid is allowed.

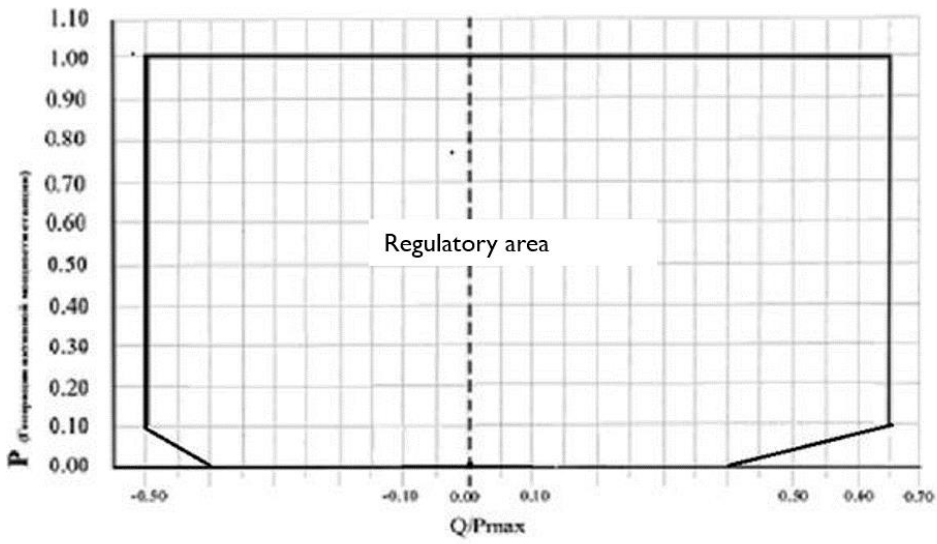


Figure 5. Dependence of SPP's Reactive Power Regulation Range on Its Actual Generation

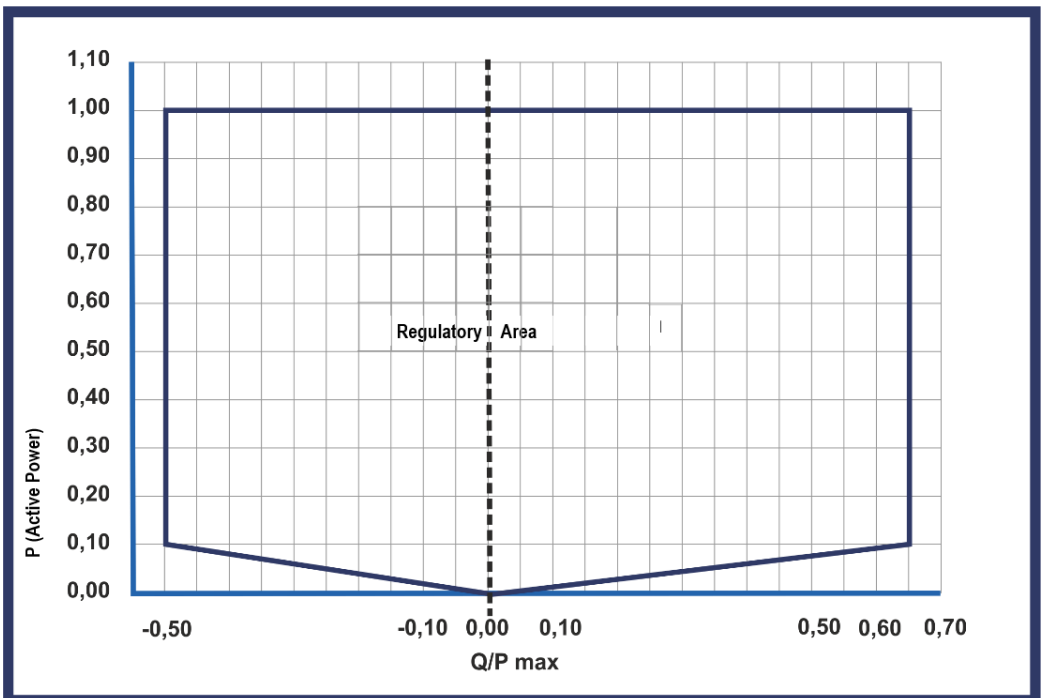


Figure 6. Dependence of SPP's Reactive Power Regulation Range on the Actual Voltage at the Connection Point



6. PRELIMINARY PROJECT PROCEDURES AND DESIGN

The construction and operation of renewable energy facilities is done in line with the legislation of the Republic of Kazakhstan on architecture, urban planning and construction activities, and the electric energy sector, as well as following the construction norms of the Republic of Kazakhstan: 1.02-03-2011 “Procedure for Development, Coordination, Approval and Content of Construction Project Documents” , Code of Rules of the RK 1.02-21-2007 “Rules for Development, Coordination, Approval and Contents

of Feasibility Studies for Construction Projects”, and other regulatory documents and standards. Furthermore, renewable energy facilities are constructed using new generating equipment (which has not been in operation before).

Construction projects are implemented in the following stages³⁹ based on the relevant claim for a land plot:



Figure 7. Main Implementation Stages of Construction Projects

³⁹ Order of the Minister of National Economy of the Republic of Kazakhstan dated November 30, 2015, No. 750, On Approval of the Rules for the Organization of Construction and the Passage of Licensing Procedures in the Construction Sector.

6.1 Obtaining Source Materials to Develop Construction Projects⁴⁰

Source materials to design construction projects include:

- ✓ Architectural planning specifications (APS)
- ✓ Technical specifications (TS) for connection to the sources of engineering and utility provision
- ✓ Cross profiles of roads and streets
- ✓ Vertical design elevations
- ✓ Extracts of the detailed design plan
- ✓ Layout scheme of external utility networks

Request⁴¹ for the provision of source materials is submitted (in line with *Annex 13*) to the local executive bodies of the cities of Nur-Sultan, Almaty and Shymkent, of districts and cities of regional significance through the "electronic government" web portal:

www.egov.kz, www.elicense.kz and shall be attached with:

- ✓ an electronic copy of the title document for the land plot (in the absence of registration in the national database "Real Estate Register");
- ✓ an electronic copy of the input form in the form provided for in *Annex №14* (in case of obtaining technical specifications);

Before the facility is designed, the investor needs to obtain APS and TS for connection to engineering and utility networks (energy, water supply, sewerage), which are issued by the structural subdivisions of the relevant local executive authorities for architecture and urban planning (architecture and urban planning office (A&UPO) on the basis of the decision on the provision of rights to land or land title of the investor.

TS for connection to engineering and utility networks is a mandatory annex to the APS.

A&UPO within not more than 1 (one) working day after receiving an application for obtaining an APS and TS, sends the input form and a situational diagram to engineering and utilities service providers to obtain technical specifications with a preliminary layout scheme of external utility networks.

Suppliers of engineering and utility services send receipt of the request TS with a preliminary scheme of the outside utility networks layout to the structural subdivisions of a relevant A&UPO within five days of

receipt.

From the date of receipt of the above documents, engineering and utility service providers prepare and send to the structural unit of the relevant A&UPO the technical specifications with a preliminary layout of external utility networks within:

- ✓ 2 (two) working days for technically and (or) technologically simple facilities;
- ✓ 5 (five) working days for technically and (or) technologically complex facilities;

In case of rejection, after making corrections, the A&UPO will resubmit the request. In such case, no repeated rejection is allowed for cause, which might have been specified earlier.

To design energy generation facilities, the timeframe for consideration should not exceed 15 business days after submitting the request; for other construction projects this timeframe is no more than 6 business days. Service fee: free of charge.

Validity period of APS and TS: APS and TS are valid for the entire time of the duration of construction, as approved in the design (design and estimates) documentation.

6.2 Approval of Schematic Design

Upon receipt of the source materials and after developing the schematic design, the applicant must obtain approvals from the LEA of the cities of Nur-Sultan, Almaty and Shymkent, of districts and cities of regional significance through the "electronic government" web-portal:

www.egov.kz, www.elicense.kz in the form according to *Annex №15*.

An electronic copy of the schematic design.

The deadline for the provision of the service or the provision of a justified refusal is 10 (ten) working days.

6.3 Design

Design documentation can be developed by individuals and legal entities that are licensed for the relevant types (subtypes) of survey and design activities in architecture, urban planning and construction.⁴²

The development of project documentation is done on the following basis:

⁴⁰ Order of the Minister of National Economy of the Republic of Kazakhstan dated November 30, 2015, No. 750, On Approval of the Rules for the Organization of Construction and the Passage of Licensing Procedures in the Construction Sector (with amendments and changes as of February 26, 2018).

⁴¹ Public Service Standard, Provision of the Initial Data for the Development of Construction and Reconstruction Projects (Re-Planning and Re-

Equipment), Annex 2 to the Order of the Acting Minister of National Economy of the Republic of Kazakhstan dated March 27, 2015, No. 257.

⁴² Construction Norms of RK 1.02-03-2011, Procedure for Development, Coordination, Approval and Content of Construction Project Documents.

- ✓ Contractor agreement (contract) for design (design and survey) works (hereinafter – design agreement), which is signed by the client, who orders the construction and executor (contractor, chief designer) following the procedure established by the law
- ✓ Design specifications approved by the client

The design agreement must specify the following:

- ✓ Types and amounts of works (services), which the executor (chief designer) intends to transfer for implementation to other entities under a subcontractor agreement,⁴³ or the fact that there are no such intentions
- ✓ Conditions of designer supervision or no need for such supervision⁴⁴

Design specifications are prepared by the client or its authorized entity (developer) and approved by the client, following the template specified in *Annex 16*. Approved design specifications are an integral part of the agreement.

Together with the design specifications, the client presents the design organization (chief designer) with source materials to develop project documentation, which includes the following:

- ✓ Decision of the relevant local executive body on providing the right to land, including regulations on the use of territory within identified borders and the purpose of the facility
- ✓ TS for connection to the engineering and utility networks, provided by the suppliers of engineering and utility services for construction
- ✓ APS, issued by the A&UPO, including the conditions for land use planning and landscaping

Project documentation is considered complete after its approval in accordance with the procedure established by law. Article 312 of the Code of Administrative Offenses of the Republic of Kazakhstan of July 5, 2014, No. 235-V (hereinafter, the Administrative Code) establishes administrative responsibility for the performance of pre-design, survey, design, construction and installation works, production, use of construction materials, structures violating the Republic's legislative requirements for architectural, urban planning and construction activities. For violations, government officials are fined in the amount of 60 monthly calculation indices (MCI), small

businesses 200 MCI, medium-sized businesses 400 MCI, and large businesses 700 MCI.

Procedure for Signing Off on Project Documentation

The developed project documentation, which contains the record of the chief engineer of the project (the chief architect of the project) on the project's or working project's compliance with the requirements of state standards, is not subject to additional sign-off by state bodies, except for cases stipulated by the laws of the Republic of Kazakhstan.

Procedure for Approving Project Documentation

Project documentation is subject to expert examination after the procedure of mandatory approvals, prior to its final approval, unless otherwise established by the legislation on architecture, urban planning and construction activities.

Expert examination is done following the procedure specified by the Government of the Republic of Kazakhstan.

At the same time, a mandatory state expert examination is carried out by a legal entity authorized by the Government of the Republic of Kazakhstan, for facilities, considered its exclusive competence in accordance with the legislation of Kazakhstan. For facilities and complexes that are planned to be designed and built in stages, the state expert examination can be carried out at the appropriate stages (expert support).

The procedure for expert support is established by state standards approved by the body authorized for architecture, urban planning and construction. The absence of comments by the state expert examination in local conclusions, carried out in the expert support mode on the set of documentation at each stage, is the basis for the intermediate approval of this part of the project by the customer and the beginning or continuation of construction.

Expert examinations of projects that are not considered the exclusive competence of the state can be done private examination experts.

Project documentation for construction, which is subject to mandatory expert examination (state expert examination) but which has not obtained the opinion following the required procedure, is considered incomplete and cannot be approved and implemented.

⁴³At the same time, it is prohibited to subcontract cumulatively over two thirds of the costs of all design (design and survey) works as specified by the contract.

⁴⁴ Designer supervision is implemented to control the development of the construction project (construction documentation) carried out by the author(s) of the architectural and urban planning work and the implementation of a construction project carried out by its developers, including the author(s) of the architectural or urban planning work. Designer

supervision is implemented by the developers of design (design and estimate) documentation at all construction sites, except for cases of the construction of individual houses and other technically uncomplicated buildings intended for personal use by a citizen, the erection of temporary structures located on personal plots, the reconstruction of existing buildings not connected with a change in load-bearing and enclosing structures, and cases when the owner or investor independently puts the technically uncomplicated facilities into operation.

Project documentation for facility construction should be presented no later than 3 months after obtaining a positive opinion of the state expert examination.

The project documentation developed and agreed upon in accordance with the design specifications, architectural and planning specifications, other source materials and technical specifications, based on the positive opinion of the expert examination (state expert examination) of projects is subject to approval in the manner established by the legislation and in accordance with the requirements established by state regulatory documents.

The following must be approved:

- ✓ For single-stage design – working project
- ✓ For two-stage design, a project developed during stage one. Working documents, prepared during stage two are not subject to expert examination and are approved by the client

The project documentation for which construction has not started for three or more years after its approval is considered obsolete and can be used after it has been brought into line with the current state standards and re-confirmed in accordance with the procedure established by law.

General Provisions for the Development of the Feasibility Study and Design and Estimate Documentation

Construction (reconstruction, restoration, expansion, technical re-equipment, modernization, overhaul) of facilities and their complexes, as well as laying of communications, land use planning and landscaping are carried out according to the design (design and estimate) documentation developed in accordance with properly approved detailed design projects, a development project, performed on the basis of the master plan of the settlement (or their replacement scheme for development and construction in populated areas with a population of up to 5,000 people).

Design stages are laid out in the specifications for the design's development (design and estimate) documentation for construction, following the regulatory requirements.

Design documents are completed in two stages for large residential, civil or industrial constructions (buildings, facilities, complexes, transport and utility networks, other life support facilities) with a regulatory duration of construction of over 24 months, which require adjustments in the design process and detailing of initial parameters, characteristics, structural layout and certain space planning, engineering and technical design solutions:

1. Stage One: A project, which is usually developed based on the conclusions and indicators of preliminary project documentation (which is

subject to approval) following the procedure specified by the laws of the Republic of Kazakhstan.

2. Stage Two: Working documentation, which is developed based on project approval at the first stage.

Project documentation for the construction of facilities of special significance, which reflect state or public interests, which are implemented with government investment, also require a two-stage approach.

Project documentation for the construction of civil and industrial facilities (buildings, structures, complexes, and laying of communications lines) with a standard construction duration of up to 24 months and not requiring a long design period is developed in Stage One: a working project that is subject to approval in the order established by law.

Project documentation not specified by these regulations is also developed in one stage:

- ✓ For facilities that will be constructed based on model projects (with a link to model projects) or with the use of individual model design solutions (model building constructions, units, blocks)
- ✓ When an individual project, developed earlier, is submitted for repeated or multiple use in construction (with links to individual projects) for reconstruction (modernization, technical re-equipment, overhaul) of existing facilities

The design and estimate documentation (DED) for which no construction has been started within 3 years or more after the end of its development is considered obsolete and can be used for implementation only after a new expert examination and re-approval in accordance with the procedure established by law.

Construction (reconstruction, restoration, expansion, technical re-equipment, modernization, overhaul) of facilities and their complexes, as well as communications, site preparation and landscaping is not allowed without the project documentation (design and estimate) approved under established procedure, unless otherwise provided by the legislation of the Republic of Kazakhstan on architectural, town planning and construction activities.

The development procedure, mandatory contents and composition of the preliminary project and DED documentation is specified by government regulations and approved by the authorized body for architecture,

urban planning and construction.⁴⁵ However, the development of environmental impact assessment (EIA) and sanitary protection zone (SPZ) are mandatory both for the feasibility study and DED. Section 7 of this report describes the EIA procedures.

Developing Feasibility Study

In cases where technologically simple facilities are to be constructed, no feasibility study is required.

The technical complexity of the designed facility⁴⁶ is determined by the level of importance in terms of the technical requirements for the reliability and strength of the foundation and building structures stipulated by state (interstate) norms that determine the basic provisions for calculations, loads and impacts, taking into account the possible seismic hazard, other special geological (hydrogeological) or geotechnical conditions, and also taking into account the natural-climatic features of the facility's location.

To account for the degree of importance of buildings and structures, characterized by the possible economic, social and environmental consequences caused by the complete or partial loss of the bearing capacity of the structure of the facility as a whole or its main elements (individual products), the following levels of importance for buildings and structures are specified:

- ✓ First: enhanced
- ✓ Second: normal
- ✓ Third: reduced

Technically complex facilities (complexes) include all buildings and facilities of the first (enhanced) and second (normal) levels of importance, except for facilities at the second (normal) level of importance, which are not considered technically complex: industrial facilities. These include manufacturing facilities, which are not hazardous in terms of fire, explosions, gas, chemically aggressive, poisonous or toxic, with a total span of less than 12 meters and/or a height under 12 meters and/or with cranes with lifting ability below 5 tons; civil facilities; other facilities: power transmission lines and other energy facilities with voltages below 35 kV (kilovolt); external water supply networks with operational pressure below 1 MPa (megapascal) with a diameter up to 300 mm (millimeters) (inclusive) and facilities that are part of those, including distribution (street, city quarter level) networks, internal water supply, internal sewerage networks, building-level water supply and sewerage networks, water treatment facilities for individual

housing blocks with less than 500 inhabitants, etc.

Technically complex facilities (complexes) do not include buildings and structures of the third (reduced) level of importance, as well as facilities of the second (normal) level of importance specified above.

The purpose of the feasibility study is the development of optimal design solutions, including the most optimal structure and scope of the investment project for the most appropriate marketing, technical, technological, financial, institutional, environmental, social and other solutions envisaged for the project.

The composition and content of the feasibility study should be sufficient to assess the feasibility and effectiveness of investments in the construction of facilities. Each section of the study be elaborated and contain the study's results and determine the efficiency of the construction project conducted on the basis of a cost-benefit analysis.

The cost-effectiveness of the investment should be proven by the calculations and a comparison of the technical and economic indicators of the project with similar projects, if any.

The contents of the feasibility study for industrial projects should include the following sections:

- ✓ *Source materials*
- ✓ *Introduction*
- ✓ *Marketing section*
- ✓ *Capacity of the facility*
- ✓ *Supply of resources to the facility*
- ✓ *Main technical and technological solutions*
- ✓ *Facility location*
- ✓ *Main architectural and construction solutions*
- ✓ *Transport*
- ✓ *Utility systems*
- ✓ *Environmental impact assessment*
- ✓ *Institutional section*
- ✓ *Financial analysis*
- ✓ *Investment efficiency*
- ✓ *Social impacts*
- ✓ *Technical and economic indicators*
- ✓ *General conclusions*
- ✓ *Annexes*

⁴⁵ Construction Norms of RK 1.02-03-2011, Procedure for development, coordination, approval and content of construction project documents and construction rules of the RK 1.02-21-2007, Rules For Development, Coordination, Approval and Contents of Feasibility Studies for Construction Projects.

⁴⁶ Order of the Minister of National Economy of the Republic of Kazakhstan dated February 28, 2015, No. 165, On the Approval of the Rules for Determining the General Procedure for Classifying Buildings and Structures as Technically and/or Technologically Complex Facilities.

The preliminary project documentation (feasibility study) for construction of new and changed (reconstruction, expansion, technical re-equipment, modernization, overhaul) electric installations shall include a power plant power generation scheme.

The feasibility study developed for technically complex and technologically related (stage-by-stage) projects with an electric capacity of at least 200 megawatts must provide a summary estimate of the construction for a reserve of funds remaining at the disposal of the customer, at a rate of 10% of the estimated cost of construction.

The feasibility studies approved in accordance with established procedure serve as the basis for further development of design estimates and financing of design and survey works.

The main document regulating legal and financial relations, mutual obligations and the responsibilities of the parties to the feasibility study is the contract.

The customer applies to an organization specializing in developing feasibility studies. Contacts of some specialized organizations providing services for the development of a feasibility study are given in [Annex 17](#).

An integral part of the contract should be the feasibility study development specifications, which provide the source materials, basic technical and economic indicators, and other customer requirements.

Development of Design and Estimate Documentation

Construction (reconstruction, restoration, expansion, technical re-equipment, modernization, overhaul) of facilities and their complexes, including renewable energy facilities, as well as communications, engineering preparation of the site, landscaping are done following the project DED.

The design and estimate documentation include the construction project – the documentation containing the spatial, design, technological, engineering, environmental protection, economic and other solutions, as well as estimates for the organization and maintenance of construction, engineering preparation of the territory and landscaping.

Contents of the Construction Project⁴⁷

- ✓ Project design passport
- ✓ Energy performance certificate (in line with the design specifications)
- ✓ General executive summary

- ✓ Project master plan and transport organization
- ✓ Ground protection
- ✓ Technological solutions
- ✓ Production, enterprise management, organization of occupational health and safety system
- ✓ Architectural and construction solutions
- ✓ Utility networks, systems and equipment
- ✓ Engineering and technical activities for civil protection and activities for prevention of natural and manmade disasters
- ✓ Automated system for monitoring buildings and facilities
- ✓ Comprehensive security and anti-terrorism protection system for facilities of special importance, long-span structures and high-rise buildings, and their complexes
- ✓ Organization of construction, following the scope specified in the design specifications
- ✓ Environment protection
- ✓ Cost estimates
- ✓ Efficiency of the investment (in line with the conditions specified in the design specifications) and technical and economic indicators
- ✓ Summary list of the required construction materials, articles and structures, as well as equipment, including local content (approved by the client)

DED for the construction of new and changes to (reconstruction, expansion, technical re-equipment, modernization, overhaul) energy facilities contains sections on the power plant power generation scheme or user connection scheme.

The project (design and estimate) documentation, which is developed for technically complex and technologically linked (implemented in stages) facilities with capacities of at least 200 MW, must include a reserve of funds in the summary construction calculations, which remain with the client, and are equal to 10% of the estimated cost of construction.⁴⁸

The “General data” section of the project document contains graphic materials (main blueprint) for every section (drawing) and a not, signed by the chief engineer (chief architect) of the project on the compliance of the project or working design with state regulatory norms and/or intergovernmental norms,

⁴⁷ According to the Construction Standards of RK 1.02-03-2011, Procedure for Development, Coordination, Approval and Content of Construction Project Documents.

⁴⁸ Source: p. 11-5 of Construction Standards of RK 1.02-03-2011, Procedure for Development, Coordination, Approval and Content of Construction Project Documents.

applied in the Republic of Kazakhstan).⁴⁹

The title page of the general executive summary should contain the signatures of the head of the design (main design) organization, chief engineer (chief architect) of the project and responsible officer (head of works) for each section (drawing) of the project documentation (design, working project). The notes are recorded in line with the standards of the construction design documentation system.

The drafts of master plans for settlements, detailed planning projects and other town planning documentation should contain information on water protection zones and bands, specially protected nature areas in the planned territory, indicating the availability of project approvals with the relevant authorized bodies in the manner established by the legislation of the Republic of Kazakhstan. The development of design and estimates documentation for the construction of facilities is carried out by legal entities and individuals who, in accordance with established procedure, received a state license for the corresponding type of design activity. Contact information for some specialized organizations that provide services for the development of design and estimate documentation are given in *Annex 17*.

The construction project is developed: on the basis of the design specifications approved by the customer, materials for the selection and allocation (permission to use) of the land plot (site, route), technical specifications of engineering and utility support for the facility, the results of engineering surveys, other source materials (including results of the pre-project activity of the client), in accordance with the approved justifications of investment into constructions, as established by law (technical and economic justifications, technical and economic calculations), and, if necessary, the list of construction materials, products and structures used in the project, engineering equipment and devices, as agreed with the contractor:

- ✓ In line with APS
- ✓ Project documentation is developed based on the:
 - Subcontract agreement (contract) for performance of the design (design and survey) works (hereinafter, contract), signed by the client who orders the construction,

and executor (contractor, chief designer) following the procedure specified by the laws of the Republic of Kazakhstan

- Design specifications approved by the client.

The contract must specify the following:

- ✓ Types and scope of works (services), which the executor (main designer) intends to subcontract to other parties,⁵⁰ or the absence of such intentions
- ✓ Conditions for designer supervision⁵¹

Design specifications are prepared by the client or its authorized body (developer) and are approved by the client.

Design specifications can be prepared by the executor (contractor, general designer), if the clients give instructions to do so, and becomes binding for the parties from the moment of its approval by the customer. The approved design specifications are an integral part of the contract.

Along with the design specifications, the client provides the design organization (main designer) source materials (data) to develop project documentation, which include the following:

- ✓ The decision of the local executive body on the provision of the right to land, including regulations on the use of territories, within the plot borders and the purpose of use
- ✓ TS for connection to the engineering and utility networks, provided at the request of the local executive authorities, by the providers of the engineering and utility services in the proposed construction area
- ✓ APS, issued by the A&UPO, including conditions for site preparation and landscaping

If there is a feasibility study, during the development (coordination, approval) of the project documentation for a facility, an increase in the estimated cost of construction is not allowed without appropriate justification. Neither is the deterioration of other basic technical and economic indicators of the facility achieved at the pre-project stage. The beginning of design, in accordance with the features of the contract for design work, is the date of entry into force of the contract for the development of design and estimate

⁴⁹ Project documents that contain the required notes of the chief engineer (chief architect) on the compliance of the project or working project with the requirements of state norms (intergovernmental norms in force in the Republic of Kazakhstan) are not subject to additional coordination with government bodies or other bodies, with the exception of the cases specified by the laws of the Republic of Kazakhstan. Source: p. 6.1. Construction Standards of RK I.02-03-2011, Procedure for Development, Coordination, Approval and Content of Construction Project Documents.

⁵⁰ At the same time, no more than two-thirds of the total costs of design (design and survey) works under the contract can be contracted out.

⁵¹ Design supervision is implemented to control the development of the construction project (construction documentation) carried out by the

author(s) of the architectural and urban planning work and the implementation of construction project carried out by its developers, including the author(s) of the architectural or urban planning work. Designer supervision is implemented by the developers of design (design and estimate) documentation at all construction sites, except for cases of the construction of individual houses and other technically uncomplicated buildings intended for personal use by a citizen, the erection of temporary structures located on personal plots, the reconstruction of existing buildings not connected with a change in load-bearing and enclosing structures, and cases when the owner or investor independently puts the technically uncomplicated facilities into operation.

documentation, signed by the customer and the executor (contractor, main designer).

At the initial stage of development of project documentation, preliminary design materials (sketches, mockups) containing visual and textual information about the designation and main parameters of the designed facility, its placement on the land plot (site, route) allocated for its construction are presented in local A&UPO for agreeing on the principal design decisions taken in accordance with its architectural and planning specifications.

The client (investor) approves the project's construction after receiving the positive opinion of the comprehensive non-departmental expert examination. The development of project documentation is considered complete from the moment of its approval in accordance with the procedure established by law.

Expert Examination of the Feasibility Study and DED

The goal of the comprehensive non-departmental expert examination is to conduct analyses and quality assessments of the projects by establishing the facts of compliance (non-compliance) of the design solutions with the specifications of source materials (materials, data) for design, specified by the laws of the Republic of Kazakhstan, and of compliance with the following requirements in design solutions and calculations:

- ✓ Urban planning and technical regulations, norms and provisions of government and intergovernmental regulatory documents, cost estimate measures for architecture, urban planning and construction
- ✓ Regulations and laws, as well as regulatory methodological documents on environment protection
- ✓ Regulations on the sanitary and epidemiological wellbeing of the population and hygiene norms

Comprehensive non-departmental expert examination of the feasibility study and DED for construction is done prior to their approval.

Construction projects for technologically uncomplicated facilities, funded without budgetary funds or other forms of state investment, are not subject to mandatory expert examination.⁵²

The following comprehensive non-departmental expert examination is considered the exclusive purview of the state:⁵³

- ✓ Construction projects for new industrial buildings and facilities, which are considered potentially

dangerous construction facilities, as well as new technically or technologically complicated facilities, complexes thereof, engineering and transport networks, regardless of their funding sources.

- ✓ Reconstruction, expansion, modernization, technical re-equipment and overhaul of existing facilities, funded through the budget or other forms of state investment, which are considered: potentially dangerous; technically and/or technologically complicated.

Comprehensive non-departmental expert examination, which is considered a state monopoly, is performed by the state-owned expert examination organization. The contact details of state expert examination organizations are presented in [Annex 18](#).

Accredited expert examination organizations conduct mandatory comprehensive non-departmental expert examinations of construction projects, except for the projects stipulated in paragraph above. Contact information on the accredited expert organizations is available on the website of the Construction, Housing and Utilities Committee of the MID RK.⁵⁴

A comprehensive non-departmental expert examination of construction projects that do not require mandatory expert examination can also be performed by the accredited expert organization at the request of the client.

A comprehensive non-departmental expert examination of projects conducted by the state or accredited expert organizations is done based on the contract, with the costs attributed to the project in question.

The comprehensive nature and contents of the presented construction project and source data should follow the list of documents (materials) to be supplied for comprehensive non-departmental expert examination:

- ✓ For the construction of new facilities in line with [Annex 19](#) to these rules
- ✓ For reconstruction projects (expansion, modernization, technical re-equipment) of existing facilities
- ✓ For project overhauls of existing facilities

The following is attached to the materials:

- ✓ Copies of licenses of the developers of DED, which give permission to conduct the relevant types of design activities.

⁵² In line with Paragraph 4, Article 64-1 of the Law of the Republic of Kazakhstan dated July 16, 2001, No. 242-II, On Architectural, Urban Planning and Construction Activities in the Republic of Kazakhstan.

⁵³ Article 64-4 of the Law of the Republic of Kazakhstan dated July 16, 2001, No. 242-II, On Architectural, Urban Planning and Construction Activities in the Republic of Kazakhstan.

⁵⁴ <http://kds.mid.gov.kz/ru/pages/reestr-ekspertnyh-organizaciy>

- ✓ Official source documents, which served as the basis for project construction and design decision making, as well as documents proving preliminary approval of the project, as stipulated by the legislation of the Republic of Kazakhstan on architecture, urban planning and construction, environmental protection and sanitary and epidemiological wellbeing of the population.

To implement the “one-stop shop” principle, the construction projects (feasibility study and DED) with source documents are submitted for comprehensive non-departmental expert examination only through a single portal for comprehensive non-departmental expert examination (hereinafter – portal).

The portal is a single platform for:

- ✓ Clients who order projects, regardless of their ownership, departmental affiliation and sources of funding
- ✓ Designers of construction projects
- ✓ State or accredited expert organizations that conduct comprehensive non-departmental expert examinations

When conducting comprehensive non-departmental expert examinations, state and accredited expert organizations conduct all procedures and operations using the information systems of the state expert organization and chamber of expert organizations, which are integrated with the portal.

The comprehensive nature and contents of the submitted construction project and source documents are checked against the list of documents (materials) using the systems of the state expert organization or one of the accredited expert organizations selected by the client, within 5 business days after the day the abovementioned materials were registered on the portal.

After 5 working days, if the project or source documents are incomplete or inconsistent with the requirements for contents, the customer will get an official notification of refusal to accept the project for expert examination and its return without consideration, indicating the missing materials to be re-submitted for expert examination after the project and/or source documents are amended to comply with completeness and contents requirements.

Acceptance by the expert organization of the construction project (taking into account the source documents attached to it) after confirmation of their required completeness and contents, as well as the establishment of the cost of expert works, the timing and duration of the works, serve as the basis for concluding an agreement with the customer for conducting a complex non-departmental expert examination on the submitted construction project.

Agreement on a comprehensive non-departmental expert examination, conducted by the state or accredited expert organization, is concluded through the portal and information systems of the state expert organization or chamber of expert organizations in electronic form (e-contract). Authorized representatives of the parties sign this agreement using their electronic digital signatures.

The project (feasibility study or DED) presented for comprehensive non-departmental expert examination with source documents is sent by the client through the portal to check for completeness and contents of the materials against the norms of the state or accredited expert organization, selected by the client.

The date of the beginning of expert works is the date when agreement for comprehensive non-departmental expert examination with the state or accredited expert organization enters into force.

During a comprehensive non-departmental expert examination, experts do the following:

- ✓ Request and receive from the client and designers of the project the necessary materials and information, which are provided to them within the deadline set by the expert
- ✓ Provide observations, for the purpose of correction

When conducting a comprehensive non-departmental expert examination, the body creates expert committees to consider construction projects during the comprehensive non-departmental expert examination in the area of environmental assessment. The environmental expert examination committee considers construction projects and provides its opinion within 10 business days after the materials are provided to the body.

A negative opinion of the comprehensive non-departmental expert examination is drafted and sent to the client if a noncompliance is identified with conditions, requirements or limitations specified by the source documents (materials, data) and state (intergovernmental) design and construction norms, sanitary and epidemiologic requirements, and regulatory and methodological documents on environment protection.

The expert examination agreement is terminated in such cases.

Data on the current status of the cases of project materials review by the experts are posted on the appropriate section of the Internet site of a state or accredited expert organization weekly, indicating the following:

- ✓ Name of expert organization that provided a comprehensive non-departmental expert examination of the project

- ✓ Official name of the project (feasibility study or DED), sector of the designed facility and its location
- ✓ Client (investor, owner) and project funding sources
- ✓ Project designer (main designer)
- ✓ Results of the acceptance procedure for the documents provided for expert examination
- ✓ Date when the agreement was signed to conduct a comprehensive non-departmental expert examination, specifying the date when the agreement entered into force

The regulated duration of the comprehensive non-departmental expert examination of construction projects (feasibility study and DED) is defined based on the following:

- ✓ Technological and/or technical complexity of the project, and importance level of the constructed facility
- ✓ Class, category, epidemic significance or potential danger of the designed facility
- ✓ Calculated normal duration of the design
- ✓ Calculated indicator of the normal duration of the construction of the designed facility

The timeframe and duration of a comprehensive non-departmental expert examination, conducted by the expert organization, are specified in the agreement, which is concluded by the executor and the client, but shall not exceed the following:

- ✓ 45 business days for constructing facilities that are considered technologically or technically complex with levels I and II of importance, potentially dangerous production facilities.
- ✓ 30 business days for constructing facilities that simultaneously are not technologically and technically complex facilities of level II importance, and not considered potentially dangerous.
- ✓ 10 business days for constructing facilities that simultaneously are not technologically and technically complex facilities of level III importance, and not considered potentially dangerous.
- ✓ If the agreements specify a different timeframe for expert examination, which is shorter than the maximum allowable time, the timeframes for observations and consideration of sections are distributed proportionally, specifying for deadlines and stages.

During a comprehensive non-departmental expert examination, the experts send motivated observations to the client, which are given to the client at the latest in the following timeframe:

- ✓ 20 business days from the entry of the agreement into force and are corrected by the client within 10 business days after the observations are issued, given that the duration of expert examination is no more than 45 business days.
- ✓ 15 business days from the entry of the agreement into force and are corrected by the client within 5 business days after the observations are issued, given that the duration of expert examination is no more than 30 business days.
- ✓ 4 business days from the entry of the agreement into force and are corrected by the client within one business day after the observations are issued, given that the duration of expert examination is no more than 10 business days.
- ✓ 26 business days from the entry of the agreement into force and are corrected by the client within 14 business days after the observations are issued, given that the duration of expert examination is no more than 60 business days.

If motivated observations are not corrected in time, a negative opinion of the experts will be issued.

The cost of non-departmental expertise: the cost of expert works performed by the state expert organization with the participation of industry expertise, regardless of the source of funding, is established in accordance with the rules for determining the cost of works on the comprehensive non-departmental expert examination of construction projects, as approved by the authorized body for architecture, urban planning and construction.

The cost of expert works performed by accredited expert organizations is specified in the agreement between the client and expert organization.

Article 316 of the Code of Administrative Offenses establishes administrative responsibility for the construction or reconstruction (restoration, expansion, technical re-equipment, modernization, overhaul) of facilities and their complexes without project (design and estimates) documentation, or project (design and estimate) documentation that has not undergone required due examination, in the form of a fine of 120 MCI for individuals, 160 MCI for officials, 200 MCI for small businesses or non-profit organizations, 380 MCI for medium-sized businesses, and 580 MCI for large businesses.

Depending on the specific nature of the renewable energy facility, feasibility studies and design and estimates documentation may be subject to additional approval by the authorized body for the study of subsoil (MID RK), the central authorized body for land resource management (MoA RK) the authorized body on civil protection – the Ministry of Internal Affairs of the Republic of Kazakhstan (MIA RK), the authorized body for industrial safety (MID RK), the authorized body on water transport issues (MID RK), as well as

local executive authorities, on whose territory the implementation of the construction of a renewable energy facility is planned.

Design, construction and deployment on water bodies⁵⁵ and/or water protection zones (with the exception of water protection bands) of new facilities (buildings, structures, complexes thereof as well as utility networks), and reconstruction (expansion, modernization, technical re-equipment, re-designation) of existing facilities, which were constructed before the land plots were designated water protection zones or bands or other types of nature conservation territories have to be agreed with the authorized body (MoA RK), the authorized body in the area of environmental protection (MoE RK), the authorized body on subsoil study (MID RK), the central authorized body on land resources management (MoA RK), the authorized body

on sanitary-epidemiologic wellbeing of the population - the Ministry of Healthcare of the Republic of Kazakhstan (MoH RK), the authorized body on veterinary (MoA RK), and local *oblast*-level executive authorities (city of the republican significance, capital city).

The same activity on water bodies that are potentially dangerous must be agreed by the body authorized for civil protection (MIA RK), and for navigable waterways, with authorized body on water transport (MID RK).

After the comprehensive non-departmental expert examination, the client must notify the architecture and construction oversight bodies of the local executive authorities about the start of construction and installation activities.

⁵⁵ Paragraph 3, Article 125 of the Water Code of the Republic of Kazakhstan dated July 9, 2003.



7. ENVIRONMENTAL IMPACT ASSESSMENT AND ENVIRONMENTAL PERMITS

7.1 Environmental Impact Assessment

An environmental impact assessment (EIA) is mandatory for all types of economic and other activities that may have a direct or indirect impact on the environment and public health.

The results of the impact assessment are an integral part of the pre-project and project documentation.

In accordance with Clause 3 of Article 36 of the Environmental Code of the Republic of Kazakhstan dated January 9, 2007, No. 212-III (hereinafter, the Environmental Code of the Republic of Kazakhstan), the future activities of the projected facilities are subject to an EIA.

The authorized environmental protection body is the Ministry of Ecology, Geology and Natural Resources of the Republic of Kazakhstan. According to Clause 28 of Article 17 of the Environmental Code of the Republic of Kazakhstan, the authorized body, develops and approves instructive and methodological documents for conducting the EIA. Thus, according to Clause 3 of the Instructions for Conducting Environmental Impact Assessment approved by the Order of the Minister of Environmental Protection of the Republic of Kazakhstan dated June 28, 2007, No. 204-p (hereinafter, the Instructions for Conducting EIA), the EIA is carried out for :

- ✓ Pre-investment stage of the rationale for the development programs or the construction of enterprises, facilities, complexes
- ✓ Urban planning and construction design stipulated by legislation of the Republic of Kazakhstan
- ✓ Feasibility study and calculations of construction, and drafts of working documentation (expansion, reconstruction, technical re-equipment) of enterprises, and the facilities of complexes
- ✓ Project documentation on the use of technologies, machinery and equipment, including those that are imported into the Republic of Kazakhstan

The customer (initiator) and project developer must take into account the results of the environmental impact assessment and ensure the adoption of the option that causes the least damage to the environment and human health.

According to Clause 7 of the Instructions for Conducting EIA, in the process of developing pre-project and project documentation that justifies economic and other activities, the EIA procedure is carried out in the order of successive stages, the results of which are submitted for consideration by the state environmental expert review:

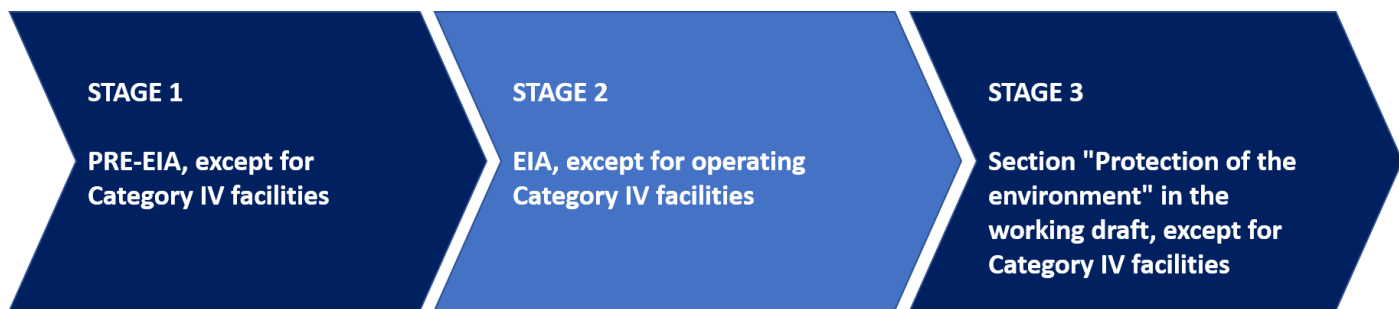


Figure 8. EIA Procedure Stages

1. Preliminary environmental impact assessment (pre-EIA), except for Category IV facilities.
2. The EIA is carried out to fully and comprehensively analyze the possible effects of project implementation or further implementation of economic and other activities, justify alternative options, and develop an environmental management plan (program), with the exception of existing facilities in category IV.
3. The “Protection of the Environment” section in the working draft contains technical solutions for the prevention of adverse environmental impacts, with the exception of Category IV facilities.

In accordance with Article 40 of the Environmental Code of the Republic of Kazakhstan, the economic activities of the investor for which the EIA is carried out are divided into four categories: I, II, III, IV:

- ✓ Category I includes activities related to the 1st and 2nd hazard classes according to the sanitary classification of production facilities (Annex I to the Sanitary Regulations: “Sanitary and Epidemiological Requirements for the

Establishment of the Sanitary Protection Zone of Production Facilities” approved by Order No. 237 of the Minister of National Economy of the Republic of Kazakhstan dated March 20, 2015 (hereinafter Sanitary and Epidemiological Requirements) wastewater discharges (to water bodies, to terrain, to storage ponds and/or evaporation ponds, in treatment facilities) from the activities of the abovementioned hazard classes, as well as the exploration and mining of minerals other than common ones.

- ✓ Category II includes activities related to the 3rd class of hazard according to the sanitary classification of production facilities, as well as the extraction of general-purpose minerals.
- ✓ Category III includes activities related to the 4th class of hazard according to the sanitary classification of production facilities.
- ✓ Category IV includes activities related to the 5th class of hazard according to the sanitary classification of production facilities.

Table 7. Hazard Classes According to the Sanitary Classification of Production Facilities

Category	Hazard class
I category	1 st hazard class (SPZ (sanitary protection zone) 1000 m and more) and 2 nd hazard class (SPZ from 500 m to 999 m)
II category	3 rd hazard class (SPZ from 300 m to 499 m), including all types of special water use
III category	4 th hazard class (SPZ from 100 m to 299 m)
IV category	5 th hazard class (SPZ from 0 m to 99 m).

Activities that do not relate to hazard classes according to the sanitary classification of production facilities are classified as facilities in Category IV.

Article 332 of the Code of Administrative Offenses establishes administrative responsibility for failure to comply with the requirements of the legislation on compulsory conduct of state environmental expertise or requirements contained in the conclusion of state environmental reviews, as well as the financing of projects and programs that have not passed state environmental expert review in the amount of a fine: for individuals in the amount of 10 MCI, for small businesses in the amount of 30 MCI, for medium businesses in the amount of 50 MCI, and for large businesses in the amount of 350 MCI.

Environmental impact assessment for the Category I of economic and other activities is carried out by individuals and legal entities that have received a license to perform works and provide services in environmental protection in accordance with Clause I of Article 38 of the Environmental Code of the Republic of Kazakhstan.

The organization and financing of works on environmental impact assessment is provided by the customer (initiator) of the planned activity.

Individuals and legal entities that develop the EIAs are responsible to the customer for the reliability, completeness and quality of the results of the environmental impact assessment in accordance with the agreement.

The customer is responsible for the reliability of the environmental impact assessment materials submitted for state environmental review in accordance with the laws of the Republic of Kazakhstan. Control over compliance with the requirements of environmental legislation of the Republic of Kazakhstan during the process of environmental impact assessment is carried out by the authorized environmental protection body:⁵⁶

In the process of conducting an EIA in accordance with Clause I of Article 39 of the Environmental Code of the Republic of Kazakhstan, the following shall be accounted:

- ✓ Direct impacts are those directly provided by the main and related planned activities in the facility area.
- ✓ Indirect impacts are environmental impacts that are caused by indirect (secondary) factors arising from the implementation of the project.
- ✓ Cumulative impacts are impacts arising from ever-increasing changes caused by past, present or

reasonably predictable actions accompanying the project.

In the process of environmental impact assessment, an impact assessment is conducted on:

- ✓ Natural air, except for the impact of greenhouse gas emissions
- ✓ Surface and subsurface water
- ✓ Surface of the bottom of reservoirs
- ✓ Landscapes
- ✓ Land resources and soil cover
- ✓ Flora
- ✓ Fauna
- ✓ State of ecological systems
- ✓ State of health of the population
- ✓ Social sphere (employment of the population, education, transport infrastructure)

The environmental impact assessment must consider the negative and positive effects of the impacts on the environment and human health.

In accordance with Article 41 of the Environmental Code of the Republic of Kazakhstan, EIA documentation includes:

- ✓ details of the customer of economic and other activities;
- ✓ Petition (application) with justification of the need for implementation of the planned activity, justification of investments, feasibility study (project), approved part of the working draft, and explanatory notes
- ✓ Description of the state of the environment before the implementation of the activity or at the current moment
- ✓ Description of the project, including:
 - The objectives and quantitative characteristics of the entire project and the requirements for the area of deployment during the stages of construction and operation
 - The main characteristics of production processes, including the type and amount of materials and equipment used, indicating the possible types of impacts of the planned activity on the environment, with the volume and composition of emissions to the environment, consumed raw materials and exploited resources.

⁵⁶ Paragraph 4, Article. 38 of the Environmental Code.

- ✓ Analysis of the applied technology for compliance with the best available technologies and technical standards, as well as compliance with technical regulations and environmental requirements for technologies, equipment and machinery
- ✓ Information on alternative options and an indication of the main reasons for choosing a project option
- ✓ Description of the possible impacts of activities on the environment, public health and socio-economic conditions
- ✓ Unclear effects of the proposed economic and other activities on the environment
- ✓ Assessment of environmental risks and risks to public health
- ✓ Description of the measures foreseen to prevent or reduce the impact on the environment, including proposals for environmental monitoring
- ✓ Design standards for emissions into the environment and standards for the extraction of natural resources:
 - Justification of the plan of measures for environmental protection
 - Justification of the waste management program
- ✓ Justification of the program of industrial environmental control
- ✓ Environmental and economic evaluation of the project, taking into account possible risks and compensation for damage, and materials on public opinion drawn up by protocols and containing conclusions on the results of public discussions of the environmental aspects of the proposed activity
- ✓ Indication of any difficulties and lack of information in conducting an environmental impact assessment
- ✓ The main conclusions from the results of the environmental impact assessment

Based on the results of the environmental impact assessment, the customer (initiator) of the proposed activity prepares and submits a statement on the environmental consequences of the planned or ongoing activities, which serves as the basis for preparing a decision on the admissibility of the project. The environmental impact statement is a separate annex to the EIA.

The statement on the environmental consequences is drawn up at all stages of the implementation of the EIA procedure. The application is submitted as part of project materials for the state environmental expert review.

According to Clause 3 of Article 41 of the

Environmental Code of the Republic of Kazakhstan, the completeness of the content of the documentation for each of the stages of environmental impact assessment is determined by the instruction for carrying out an environmental impact assessment.

In developing EIA materials for pre-project and project documentation, which justify economic and other activities, public opinion is taken into account.

Public opinion is taken into account through public participation in the preparation and discussion of EIA materials, and is organized by the customer.

The main organizational forms of accounting for public opinion in accordance with clause 52 of the Instructions for Conducting EIA are:

- ✓ Public hearings: the customer (developer) of the pre-project and project documentation organizes a public hearing to gather the opinions of members of the public by holding a meeting of representatives of the public. To this end, the customer provides the mass media (hereinafter, media) with information on the public hearings held, the procedure for public access to the EIA draft, the date, time and location. Representatives of the interested public, the customer and the developer, local executive authorities and territorial environmental protection bodies take part in public hearings.
- ✓ Written proposals and comments are collected through a questionnaire survey of the population of the activity area. To conduct this event, the customer informs the public about the results and procedure for giving the public access to the draft EIA materials, and the terms and conditions for organizing the questionnaire survey.
- ✓ In collecting written proposals and comments from the public, the customer (developer) informs the public about the manner in which the public can access the draft EIA materials and submit proposals and comments. The customer organizes the receiving and registration point for proposals and comments received from the public. The choice of the organizational form of accounting for public opinion depends on the importance of the project and the degree of its influence on the environment and human health. The choice of the organizational form and the timing of the public hearings are agreed by the environmental authorities.

In accordance with Clause 54 of the Instructions for Conducting EIA, the results of the pre-project and project materials that can have a significant impact on the environment and human health, are presented at the public hearings, taking into account one of three (or in combination) parameters, namely, size, period and intensity of impact.

The customer (the developer) provides documentation

of the process of accounting for public opinion in the form of transcripts, photos, videos, audio recordings and other materials, including:

- ✓ An announcement of registration of public opinion
- ✓ Provision of information on the results of the EIA to the media
- ✓ Registration of persons who are familiar with the EIA draft
- ✓ Preparation of lists of participants for public hearings
- ✓ Registration of the received written proposals and comments on the EIA draft
- ✓ Drawing up of a protocol of public hearings, which sets out the key issues for discussion and disagreement between the public and the customer
- ✓ Preparation of a comment on the accounting of proposals and public comments in the project documentation.

At all stages of the procedure, it is necessary to conduct special scientific research and engineering environmental surveys with mandatory involvement of specialized accredited laboratories in accordance with Clause 34 of the Instructions for Conducting EIAs. An SPZ is established to ensure the safety of the population. The zone's size ensures a reduction in the effects of air pollution (chemical, biological, physical) in regard to the values established by the documents of the state system of sanitary and epidemiological regulation, for facilities of hazard classes I and II and to the values of an acceptable risk to public health. According to its functional purpose, SPZ is a protective barrier ensuring the safety of the population when operating the facility in its regular mode.

SPZ is the territory separating the special-purpose zones, as well as industrial organizations and other production, communal and storage facilities in populated areas from nearby residential areas, buildings and civil engineering structures, to mitigate the impact of unfavorable impacts on them.

The rationale for the size and boundaries of the SPZ is developed by the entity operating facilities that are sources of chemical, biological, or physical effects on the air of populated areas, at the stages of pre-design and design documentation (urban planning, placement, design, reconstruction, and technical re-equipment).

The sources of impact on the environment and human health are facilities for which the levels of pollution created outside the industrial site exceed 0.1 of the maximum permissible concentration, and/or the maximum permissible level, or the contribution to the

contamination of residential areas that exceeds 0.1 of the maximum permissible concentration.

In accordance with Clause 36 of the Sanitary and Epidemiological Requirements, the rationale for an SPZ is envisaged at all stages of development of pre-project and project documentation, construction projects, reconstruction of industrial and production facilities and/or a group of industrial facilities and industries. The rationale for the size of the SPZ is carried out in accordance with the requirements set forth in sanitary regulations⁵⁷.

According to its functional purpose, the SPZ is a protective barrier ensuring the safety of the population when operating the facility in its regular mode.

In accordance with Clause 16 of the Sanitary and Epidemiological Requirements, the draft rationale of the SPZ, the sanitary buffer and the assessment of an acceptable risk to public health are developed by specialized organizations.

In the pre-project and design documentation of the rationale of SPZ for the construction of new, reconstruction or technical transfer of existing facilities, measures and facilities are envisaged for the organization and greening of the SPZ in accordance with Clause 37 of the Sanitary-Epidemiological Requirements.

For facilities that are not included in the sanitary classification, as well as with new technologies that have not been sufficiently studied and which have no analogues in the country and abroad, the width of the established (final) SPZ is established in each specific case by the decision of the chief state sanitary doctor of the Republic of Kazakhstan in accordance with Clause 8 of Article 62 of the Code of the Republic of Kazakhstan, On Public Health and the Health Care System.

In accordance with Clause 55 of the Sanitary and Epidemiological Requirements, within the boundaries of the SPZ it is not permissible to place:

- ✓ Newly-built residential developments, including separate residential buildings
- ✓ Landscaping and recreational zones, recreation areas, resorts, sanatoriums and rest homes
- ✓ Newly created and organized territories of horticultural partnerships, collective or individual *dachas* (holiday homes) and garden plots
- ✓ Sports facilities, playgrounds, educational and children's organizations, public health treatment and health-improvement organizations

⁵⁷ Sanitary Rules "Sanitary and Epidemiological Requirements for Establishing Sanitary Protection Zones of Production Facilities", approved

by the order of the Minister of National Economy of the Republic of Kazakhstan dated March 20, 2015 No. 237

- ✓ Facilities producing medicinal substances, medicines and/or dosage forms, warehouses of raw materials and intermediaries for pharmaceutical enterprises
- ✓ Facilities of food industries, wholesale warehouses of food raw materials and food products
- ✓ Complexes of waterworks for the preparation and storage of drinking water.

7.2 Environmental Permits

Natural resource users emitting pollutants to the environment are required to obtain an environmental emissions permit.

Permission for emissions to the environment is issued to the natural resource user according to his/her application under [Annex 20](#).

The permit for emissions into the environment is a set of documents of a standard form containing:

- ✓ Information about the natural resource user and his/her economic and other activities
- ✓ Term of the permit
- ✓ Terms of environmental management, including emission standards for all their sources
- ✓ Plan of measures for environmental protection for the period of validity of the permit

Emissions to the environment from all stationary sources of emissions without an environmental emissions permit are prohibited.

Greenhouse gas emissions are not subject to environmental permits, except for emissions of polluting substances listed in the Tax Code of the Republic of Kazakhstan. The facilities for which the natural resource users are provided with permits for emissions into the environment are divided into four categories: I, II, III and IV, depending on the hazard class, according to the Sanitary Classification of Production Facilities.⁵⁸

The list of documents of legal entities for obtaining environmental emissions permit includes:

- ✓ For natural resource users who have facilities in categories I, II and III, the package of documents for obtaining environmental emissions permit includes:
 - Application for the permit
 - The conclusion of the state environmental review or the conclusion of a comprehensive non-departmental

⁵⁸ Order of the Minister of National Economy of the Republic of Kazakhstan dated March 20, 2015, No. 237, On Approval of Sanitary Regulations: Sanitary and Epidemiological Requirements for the Establishment of the Sanitary Protection Zone of Production Facilities.

examination of construction projects, containing approved emission standards

- Plan of measures for environmental protection
- ✓ For newly introduced facilities in category IV:
 - Application for the permit⁵⁹
 - Norms of emissions into the environment, established and justified by calculation or instrumental means

For facilities in category I, natural resource users receive permits for emitting into the environment from the authorized environmental protection body. For facilities in categories II, III, and IV, permits are received by the local executive bodies of *oblasts*, cities of republican significance and the capital.

The service for issuing environmental permits for category I is available through web portals [egov.kz](#), [www.elicense.kz](#).

Term of the service:

- ✓ not more than 15 working days from the date of registration of the application

The service for issuing environmental permits for categories II, III and IV is available both through the authorized state agency, the PSC or the [egov.kz](#) web portal. The public service is free of charge.

Term of the service:

- ✓ For category II and II- not more than 10 working days from the date of registration of the application.
- ✓ For category IV - not more than 5 working days from the date of registration of the application.

Permits for emissions into the environment are issued for a period extending to the change in the applied technologies and environmental management conditions specified in the current permit, but not more than 10 years for facilities in categories I, II and III. The term of permit validity for emissions of category IV facilities is issued on an unlimited basis, except for cases of change in applicable technologies and environmental management conditions specified in the current permit.

The result of consideration of the application is the issuance of the environmental emissions permit. The investor is obliged to submit a quarterly report on the fulfillment of the environmental management conditions included in the environmental permit to the authority that issued it.

Article 326 of the CoAO establishes administrative

⁵⁹ The application form for obtaining a permit for emissions into the environment is approved by the authorized body for environmental protection.

liability for non-compliance with the environmental management conditions specified in the environmental permit via a fine of 15 MCI for government officials, 30

MCI for small businesses, 50 MCI for medium-sized businesses, and 200 MCI for large businesses.



8. CONSTRUCTION AND INSTALLATION WORKS, FACILITY COMMISSIONING

According to the clause 12 of the Article 68 of the Law of the Republic of Kazakhstan dated July 16, 2001, No. 242-II, On Architectural, Urban Planning and Construction Activities in the Republic of Kazakhstan before construction and installation work begins, the customer must notify the local executive authorities of the State Architectural and Construction Supervision Authority (GASK) about the commencement of the activity.⁶⁰ The form of the notification is given in [Annex 21](#). The notification is made only in electronic form using the state information system of permits and notifications and the state electronic register of permits and notifications.⁶¹

For the implementation of construction and installation works, the customer must conclude an agreement with a specialized organization that has a state license for implementing these works. The construction process is accompanied by architectural and construction supervision and control.

According to Chapter 11 of the Urban Construction

Law, a completed construction facility is subject to commissioning. Acceptance and commissioning of the constructed facility are carried out by the customer after its ready in accordance with the approved project and availability of the declaration of conformity, conclusions on the quality of construction and installation works, and compliance of executed works with the approved project.

The complete readiness of the constructed facility is determined in accordance with the rules on the organization of construction and licensing procedures for the construction sector.

The acceptance of the constructed facility into operation is formalized by an act. The act of accepting the constructed facility is subject to approval. The approval of the acceptance certificate is made by the customer. The date of signing and the act of acceptance of the facility into operation are considered to be the date of its approval and the date of commissioning of the facility. The form of the operational acceptance

⁶⁰ In the order established by the Law of the Republic of Kazakhstan, On Permits and Notifications, dated May 16, 2014, No. 202-C.

⁶¹ Order of the Minister of Information and Communications of the Republic of Kazakhstan dated October 29, 2016, No. 232, On Approval of the Rules

for the Functioning of the State Information System of Permits and Notifications.

certificate is presented in *Annex 22*.

In addition, within three business days from the date of approval of the act of acceptance of the facility into operation, the construction customer is obliged to send to the PSC at the location of the facility the approved act of facility acceptance, with the application of the technical characteristics of the facility, the declaration of compliance and the conclusion on the quality of the completed construction and installation works, and compliance with the approved project.

The basis for entering into the information system of a legal cadaster and registration of rights on real estate is the approved act of facility acceptance.

Rules for Facility Acceptance

The operation of the constructed facility without an approved act of facility acceptance is not allowed.

Facilities whose construction has been completed are put into operation with its full readiness in accordance with the approved project. Facility acceptance from the contractor (general contractor) is carried out by the customer in conjunction with technical and designer supervision. After receiving a written notification of the readiness of the facility for commissioning from the contractor (general contractor), the customer carries out the facility acceptance.

1. The contractor notifies the customer of the facility's readiness for commissioning.
2. Then the customer asks the contractor for a declaration of compliance, technical and designer supervision of the conclusion on the quality of the works performed and their compliance with the approved design decisions, which must be provided within 3 days.
3. Based on the documents submitted in conjunction with the contractor (general contractor), the customer's technical and architectural supervisors must check the executive technical documentation for availability and completeness and inspect and accept the facility into operation under the relevant act.

In the case of violations of approved design decisions and state (interstate) standards, and in the presence of negative conclusions, the customer places the facility into operation after the contractor (general contractor) corrects the violations.

The list of rights and obligations of the customer, contractor, technical and copyright supervision is provided for in Chapter II of the Law on Architecture, Urban Planning and Construction Activities.

The forms of all documents necessary for the acceptance of the facility, including the declaration of compliance, the conclusion on the quality of

construction and installation works, and the conformity of the executed work to the project were approved by Order No. 235 of the Minister of Investments and Development of the Republic of Kazakhstan dated April 24, 2017, On Approval of Forms of Conclusion on Quality Construction and Installation Works and Compliance of the Executed Works with the Project and Declaration of Conformity.

The introduction of the declarative method of accepting a facility into operation allows for increasing the personal responsibility of the direct participants in the construction: the customer, the contractor, technical and designer supervision. Administrative and criminal liability are provided.



9. STATE REGISTRATION OF THE RIGHT TO A CONSTRUCTED RENEWABLE ENERGY FACILITY

To enter the legal cadaster in the information system for identification and technical information on newly created immovable property, the investor presents a list of documents in accordance with the legislation.⁶² Based on the results of entering information into the system, the investor is given an entitlement document with a note on the introduction into the information system of the legal cadaster. The entitlement document is issued, and notification is sent no later than one working day following the day of receipt of the documents and sending of electronic copies of documents.

The investor is obliged to apply for state registration no later than 6 months⁶³ after the date of issue of other legal documents.

Article 460 of the Administrative Offences Code provides for administrative liability in the form of a fine to a legal entity in the amount of 20 MCI for violating the time limit for filing documents on the state

registration of rights for immovable property.

For state registration, the applicant (or authorized representative of the applicant) must produce a document proving his/her identity and the following documents:

- ✓ *Application for state registration⁶⁴*
- ✓ *Entitlement document confirming the object of registration. In case of registration of the right (encumbrance) to the land plot, the identification document for the land plot is submitted. In case of assignment of rights (claims) under pledge agreements over immovable property, the agreement on assignment of rights (claims) is submitted (the agreement on simultaneous transfer of assets and liabilities);*
- ✓ *Document confirming the payment of the fee for state registration of rights to immovable property;*

⁶² Rules and deadlines for the introduction into the information system of the legal cadaster of the identification and technical information on buildings, structures and/or their components to the newly created immovable property, the state technical inspection and the rules for assigning the cadastral number to primary and secondary immovable property facilities approved by the Order of the Minister of Justice of the Republic of Kazakhstan dated May 6, 2013, No. 156.

⁶³ The Law of the Republic of Kazakhstan On State Registration of Rights to Immovable Property, dated July 26, 2007, No. 310-III.

⁶⁴ If the application for registration contains information that the aggregate book value of the assets being acquired or sold exceeds the amounts established by the anti-monopoly legislation of the Republic of Kazakhstan, then the applicant also receives the prior written consent of the anti-monopoly authority.

- ✓ The registering authority obtains the information which belongs to state electronic information resources and is necessary for state registration of rights to immovable property from the relevant state information systems in the form of electronic documents certified by electronic digital signatures;
- ✓ Legal entities submit constituent documents as well as minutes (extracts from the minutes) of the meetings of founders (members, board of directors, shareholders' board) for acquisition or alienation of immovable property items in cases provided for by the legislative acts of the Republic of Kazakhstan or constituent documents
- ✓ Foreign legal entities submit a legalized extract from the trade register or other legal document certifying that the foreign legal entity is a legal entity under the legislation of a foreign country, with a notarized translation into the state and Russian languages;
- ✓ If the application for registration contains the information that the total book value of the acquired or sold assets exceeds the amounts established by the competition legislation of the Republic of Kazakhstan, then the applicant submits the prior written consent of the antimonopoly authority;
- ✓ In case of expropriation of the land plot or other immovable property in connection with the withdrawal of the land plot for state needs, the registration of termination of ownership over the withdrawn property and emergence of the rights of the State is done upon the submission to the registering authority of the document confirming the payment of compensation by the applicant;
- ✓ If the transaction is not notarized, then the registering authority is obliged to check the authenticity of the signatures of the persons who made the transaction (their authorized representatives), their dispositive capacity (legal capacity), and the conformity with their will.

When registration is made based on a power of attorney, two copies of the power of attorney are submitted to the registering authority, one of which is

the original or a notarized copy.

These provisions do not apply to the electronic registration of rights to immovable property by Electronic digital signature (EDS) through the portal www.egov.kz.

In cases where one entitlement document contains two or more facilities of state registration, the applicant must indicate all the facilities of registration in the application. For the registration of each facility of state registration by interested persons, separate applications must be submitted.

In cases where, in the presence of several facilities of state registration in the title document, only one will be indicated in the application. The registering body is entitled to indicate to the applicant the need for state registration of other facilities of registration and setting an appropriate fee for it.

The fee rates for state registration of rights to immovable property are calculated based on MCI size and validity at the date of payment specified in Appendix I of the Standard of Public Service, On State Registration of Rights (Encumbrances) to Immovable Property.

The state registration of rights to immovable property (encumbrances of such rights) must be made within 3 working days from the date of receipt of the application to the registration authority: the PSC at the location of the immovable property. An accelerated procedure is performed within one day following the date of receipt of an application to the registration authority, provided that the amount of the fee is paid to the budget.⁶⁵

Certificate of State Registration

The registering body verifies the registration by making an inscription on the title deed submitted for registration, with the exception of electronic registration.

Electronic registration is confirmed by sending a notice of registration to a notary information system, and if possible, the e-mail and office addresses of the transaction participants on the web portal egov.kz.

⁶⁵ Resolution of the Government of the Republic of Kazakhstan No. 428 dated March 30, 2009, On Approval of the State Registration Fee Rates for Expedited Registration of Rights to Immovable Property.



10. COMPREHENSIVE TESTING OF THE ELECTRIC INSTALLATION AND COMMISSIONING OF AUTOMATED COMMERCIAL ENERGY METERING SYSTEM (ACEMS)

10.1 Comprehensive Testing of Electric Installations

According to the requirements for connecting RES⁶⁶ to electric networks, the power generating organization is obliged to conduct comprehensive tests. Prior to the commencement of these tests, an energy producing organization shall:

- ✓ Comply with the requirements of the technical specifications within the deadlines and in full
- ✓ Conclude an agreement with the system operator for the provision of services for the technical dispatching of supply to the networks and the consumption of electric energy
- ✓ Conclude an agreement with the buyer for the sale and purchase of electricity
- ✓ Conclude an agreement with an energy transmitting organization for the provision of services for the transmission of electrical energy.

After fulfilling the requirements of the technical specifications and the conclusion of the above agreements, the power transmission organization conducts comprehensive tests of the renewable energy facility, in accordance with the Connection and Output Scheme and the requirements of the Grid Rules approved by the Order of the Minister of Energy of the Republic of Kazakhstan dated December 18, 2014, No. 210 (with amendments dated July 14, 2017).

The comprehensive testing of the energy producing organization's electrical installations using RES is carried out in accordance with the test program agreed with the system operator (KEGOC JSC) after obtaining the permission of the Ministry of Energy and in the presence of an agreement for the purchase and sale of the entire amount of electrical energy produced during the comprehensive test.⁶⁷

According to the Rules for the Centralized Purchase

⁶⁶ Details of the requirements for connecting renewable energy sources to networks are described in Section 5 of this report.

⁶⁷ Clause 2-1 of Article 9 of the Law on Electric Power Industry.

and Sale by the Financial Settlement Center of Electric Energy,⁶⁸ the energy production organization notifies the FSC and the energy transmitting organization of the network of which the renewable energy facility is connected of the date of the comprehensive testing of the electric installations of the renewable energy facility 30 calendar days before the start of the relevant test. This organization also provides the forecasted volume of generation supplied to the network for the period to the end of the current year, broken down by months.

The contractor, unless otherwise provided by the construction agreement, guarantees achievement of indicators identified in the DED by facility construction and the possibility of operating the facility in accordance with the agreement for the entire guarantee period.⁶⁹

10.2 The Order of Acceptance in Commercial Operation of Automated Commercial Energy Metering System (ACEMS) for the Wholesale Electric Energy Market Participants

Acceptance for commercial operation of the ACEMS is carried out with the aim of implementing a unified technical policy for the accounting of electric energy with the help of ACEMS entities and integrating it into a single automated metering system of the Republic of Kazakhstan's wholesale market. It also entails determining the compliance of the ACEMS entities with the requirements of the legislation of the Republic of Kazakhstan on electricity and ensuring uniformity of measurements.

After the completion of pilot industrial tests, the ACEMS entities sends letters of invitation to the system operator and related entities regarding the readiness to put the ACEMS into commercial operation and to participate in the work of the commissions for analyzing the results of pilot tests of the ACEMS and making a decision on the further operation of the system.

The acceptance into commercial operation of the ACEMS is carried out by a commission approved by the CEO or technical director of the entity, which includes representatives of the:

- ✓ Power grid operator, to the electric networks of which entities are technologically connected
- ✓ Related participants in the wholesale electricity market having common boundaries of balance sheet affiliation with the entities

- ✓ General contracting, contracting and project organization
- ✓ System operator

The system operator and related entities shall agree on terms within 10 working days and send their representatives to participate in the work of the commission. The entities shall submit the following documents to the committee for consideration:

- ✓ Technical specifications for the connection of the ACEMS system to the ACEMS of the system operator
- ✓ Terms of reference for the design of the ACEMS, agreed by the system operator
- ✓ ACEMS project coordinated by the system operator
- ✓ Working documentation on the ACEMS
- ✓ Operating documentation of the ACEMS, including: technical descriptions and operating instructions for data collection, transmission, storage and display devices, ACEMS user's manual, and ACEMS system administrator's manual
- ✓ Copies of certificates on the verification of measuring instruments that are part of commercial electricity accounting in accordance with the requirements of the legislation of the Republic of Kazakhstan on ensuring the uniformity of measurements
- ✓ Examination certificates of commercial electricity accounting
- ✓ A copy of the licensing agreement for system and application software for the ACEMS
- ✓ Copies of the organizational and administrative documents for pilot operation: the program of pilot-industrial tests of the ACEMS, industrial tests of the ACEMS, and documentation of the pilot testing of ACEMS components

When reviewing the ACEMS documents, the commission:

- ✓ Checks the completeness of the documents for compliance with the requirements of the rules for the operation of an automated system for the commercial accounting of electric power for the entities of the wholesale electricity market
- ✓ Assesses compliance with the terms of reference against the requirements of ST RK 34.015-2002, Information Technology: A Set of Standards for Automatized Systems, Terms of Reference for the

⁶⁸ Article 19 of the Order of the Minister of Energy of the Republic of Kazakhstan dated March 2, 2015, No. 164, On approval of the Rules for the Centralized Purchase and Sale by the Financial Settlement Center of Electric Energy Produced by Renewable Energy Facilities, Recalculation and

Redistribution by the Financial Settlement Center of the Corresponding Share of Electric Energy for Qualified Conditional Consumers at the End of the Calendar Year.
⁶⁹ <https://rfc.kegoc.kz/ru/renewableenergy/gridconnection>.

- Creation of an Automated System, technical specifications for the creation of the ACEMS
- ✓ Assesses the compliance of the ACEMS project with the requirements of the technical design of the ACEMS
- ✓ Assesses the compliance of the working documentation with the requirements of the ACEMS project
- ✓ Assesses the compliance of the documents (sections) of the operational documentation to the automated system with the requirements of the terms of reference and the project, including the assessment of the "User's Guide" with the requirements of ST RK 1087-2002, Unified Program Documentation System User's Guide requirements for composition, content and design
- ✓ Prepares executive documentation after the implementation of the ACEMS project
- ✓ Assesses the characteristics of the system and application software with the requirements of the terms of reference and the design of the ACEMS
- ✓ Analyzes organizational and administrative documents for the pilot operation for compliance with the requirements of RD 50-34.698-90 "Guidance document on standardization. Methodical instructions. Information technology. The complex of standards and guidance documents for automated systems. The automated systems. The requirements for the content of documents"
- ✓ Analyzes the results of pilot industrial tests and pilot operation of the ACEMS
- ✓ The list of accounting complexes with identification codes with an indication of the status of the account of electric energy: "commercial" or "technical"
- ✓ Copies of certificates with valid verification dates for measuring instruments included in commercial electricity accounting
- ✓ Copies of acts of the replacement of measuring instruments included in ACEMS
- ✓ Copies of acts of verification of data transmission from the complexes to the central database of the ACEMS system operator
- ✓ Copy of the order on the appointment of responsible persons for the operation and metrological support of ACEMS, telephone numbers and e-mail addresses of contacts.

Within 15 calendar days, the system operator and the administrator of the integrated automated system verify the documents provided for by the rules for the operation of the automated system for the commercial accounting of electric power for the entities of the wholesale electricity market. If there are comments, the entity corrects the deficiencies and inform the system operator of its readiness to conduct a second check. If the results of document verification are positive, the system operator, together with the administrator of the integrated automated system, shall issue an act on re-registration of ACEMS and make appropriate changes to the register.

The results of the commission's consideration of the documents are documented in the minutes of the commission's meeting. If there are comments, the entity eliminates the deficiencies specified in the minutes and inform the system operator of the readiness for re-acceptance into commercial operation. In the absence of any comments, the commission draws up an act to put the ACEMS into commercial operation.

The system operator registers the act in the register of automated systems for commercial accounting of electrical energy, which is maintained by the system operator. The act confirms the readiness to use the ACEMS both for internal commercial settlements and for settlements in the wholesale market. The act is made in two copies, one of which is sent to the entity and the second to the registry.

Every five years after the ACEMS begins commercial operation, entities provide a letter to the system operator, which includes the following documents that confirm the operability of the system:



II. OPERATION OF RENEWABLE ENERGY FACILITIES

II.1 General Provisions

The technical regulation of the construction and operation of renewable energy facilities is carried out by the authorized state body, the Ministry of Energy of the Republic of Kazakhstan, which makes proposals for improving state standards in the design, construction, operation and safety engineering of renewable energy facilities for the production of electrical energy.

The main task of power plants, boiler houses and electric and heat networks is the production, transmission, distribution and supply of electricity and heat to consumers (hereinafter, energy production)⁷⁰.

The main technological links of energy production are energy producing organizations (power stations), energy transmission organizations (hereinafter, energy facilities), connected by a common mode and centralized operational dispatching management.

Each power facility, regardless of its organizational and legal status, must ensure the fulfillment of the objectives and conditions of activities set out in its charter. An entrepreneur in the electric power industry must ensure all the requirements specified by state and sectoral regulatory acts and documents regarding the organization and conduct of production are met.

II.2 Personnel Requirements

The main provisions of the industry's workers are:

- ✓ Complying with the contractual terms of energy supply to consumers
- ✓ Maintaining the normal quality of the released energy of the standard frequency and voltage of electric current, and voltage and temperature of the heat carrier
- ✓ Observing operational dispatch discipline
- ✓ Maintaining equipment, buildings and structures in operational readiness
- ✓ Ensuring the maximum reliability of energy production and economics in full compliance with the legislation on energy conservation
- ✓ Complying with the requirements of industrial and fire safety in operating equipment and structures
- ✓ Complying with the requirements of legislation on occupational safety and health
- ✓ Reducing the harmful impacts of production on people and the environment

⁷⁰ Order of the Minister of Energy of the Republic of Kazakhstan dated March 30, 2015 No. 247 On approval of the Rules for the technical operation of power plants and networks

- ✓ Using scientific and technological progress to improve efficiency, reliability, safety, and the environmental status of energy facilities.

At each power facility, the functions of servicing equipment, buildings, structures and communications are distributed among structural units.

Persons who have technical education and have completed the training required for their positions are allowed to work at power facilities. Persons who have passed the professional selection and are specially trained for the management of these facilities can directly influence the control of power installations. Personnel appointed to manage the work of people who influence the management of power plants and those directly serving power plants are trained in special requirements.

All employees, with the exception of those who do not directly participate in the technological processes of production, are tested on rules, norms and instructions for technical operation, labor protection, industrial and fire safety.

The review, depending on the employee's position, is carried out by the commission of energy facilities, their structural subdivisions, the higher management body, as well as the regional commissions and the central examination board of the body on state energy supervision and control.

Persons who maintain the equipment of the main power plant departments and persons admitted to special works should have a record about it in the certificate of knowledge testing.

Knowledge verification and the admission of workers and certain categories of experts, serving facilities supervised by the territorial subdivisions of the authorized state body for industrial safety, to the independent work shall be carried out in accordance with the requirements of the rules of industrial safety.

The personnel allowed to service thermal and mechanical equipment in which flammable, explosive and harmful substances are used for technological needs, must know the properties of these substances and the safety rules when handling them.

All personnel must be provided with work clothing, special footwear and personal protective equipment depending on the nature of the work performed in accordance with current standards and must use them during work in accordance with the requirements of the Labor Code of the Republic of Kazakhstan.

All production personnel should be practically trained in the methods of disconnecting a person who is being electrocuted and providing first aid to the victims in other accidents.

All power facility personnel should be practically trained in the methods of providing first aid on the

scene according to safety requirements.

There should be first aid kits or first aid bags with medicines and medical supplies in each power station shop, in substations, in the network, in laboratories and other facilities, and in the motor vehicles of visiting teams.

11.3 Technical Requirements

At each thermal power plant with a capacity of 10 megawatts (MW) or more, hydroelectric power plants with a capacity of 30 MW or more, in each district boiler house with a heat output of 50 gigacalories per hour (Gcal/hr) (209.5 gigajoules per hour (GJ/h) and more, energy characteristics of the equipment are developed, establishing the dependence of the technical and economic performance of its operation in absolute or relative terms from electrical and thermal loads. To ensure the performance of power stations and electric networks, they must:

- ✓ Meet the accuracy specified for energy consumption and process parameter measurement
- ✓ Account (exchange, daily, monthly, annual) for the established forms of equipment performance, based on readings from measurement equipments and information measuring systems
- ✓ Analyze technical and economic indicators for assessing the state of equipment, its operating modes, fuel saving reserves, and efficiency of organizational and technical measures
- ✓ Develop and implement measures to improve the reliability and economics of the equipment, reduce unsustainable costs, and reduce the losses of fuel and energy resources.

11.4 Technical Control: Technical and Technological Supervision of the Organization for the Operation of Power Facilities

At each power facility, it is necessary to organize continual and periodic monitoring (inspections, technical inspections) of the technical conditions of energy installations (equipment, buildings and structures), identify the persons responsible for their condition and safe operation, and appoint personnel for technical and technological supervision and their approved official duties.

Technical inspection encompasses the assessment of the conditions, establishment of terms and conditions of operation, and identification of measures needed to ensure the installed resources of the power plant.

The scope of the periodic technical inspection should include external and internal inspection, verification of technical documentation, and tests for compliance with the safety conditions of equipment, buildings and

structures (hydrological tests, adjustment of safety valves, testing safety devices, load-lifting mechanisms, ground loops).

Simultaneously with the technical inspection, the requirements of the supervisory (control) bodies and activities are planned according to the results of the investigation of the plant's violations and maintenance accidents, and the measures developed during the previous technical inspection.

The results of the technical inspection are entered in the technical passport of the power facility.

Power plants with flaws detected during the inspection process, as well as violations discovered during the technical inspection period, are not allowed to operate.

All technological systems, equipment, buildings and structures, including hydro constructions, that are part of the power facility are subject to periodic technical inspection.

Technical inspection is carried out by a commission of an energy facility headed by a facility technical director or his/her deputy. The commission includes managers and experts of structural units of the power facility, and experts of specialized and expert organizations.

Technical inspection is performed at least once every 5 years.

Permanent monitoring of the technical condition of the equipment is carried out by the operation, maintenance and repair personnel of the power facility.

The order of control is established by local working and service instructions.

Periodic inspections of equipment, buildings and structures are carried out by persons responsible for their safe operation.

The frequency of inspections is established by the technical director of the power facility. The results of the examinations are recorded in a special journal.

11.5 Maintenance

At each power plant, maintenance, planned repairs and the modernization of equipment, buildings, structures and communications of power plants should be organized. Control over the technical condition of equipment, buildings and structures, performance of repair works that ensure the stability of the established performance indicators, completeness of preparatory work, timely provision of planned repair work with spare parts and materials, as well as control of terms and the quality of the repair work should be entrusted to the heads of power facilities.

The management structures for the maintenance and repair of power facilities should provide for the separation of functions and performers through the

organization of the relevant units for the preparation and provision of repairs.

The scope of maintenance and scheduled repairs should be determined by the need to maintain equipment, buildings and structures in a working and efficient condition, taking into account their actual state and the requirements of instructions and regulatory documents. For all types of repair of basic power plant equipment, buildings and structures, boiler houses and networks, prospective and annual schedules should be compiled.

11.6 Necessary Documentation and Designation

The following documents should be maintained at each power facility:

- ✓ Acts of granting land plots
- ✓ General plan of the site with buildings and structures, including underground facilities
- ✓ Geological, hydrogeological and other data on the site territory with results of soil tests and groundwater analyses
- ✓ Acts of laying foundations with sections of pits
- ✓ Acts of acceptance of concealed works
- ✓ Primary acts on the yield of the building foundation, structures and foundations for equipment
- ✓ Primary acts of testing devices providing explosion safety, fire safety, lightning protection and anti-corrosion protection of structures
- ✓ Primary acts of testing of internal and external water supply systems, water supply for fighting fires, sewerage, gas supply, heat supply, heating and ventilation
- ✓ Primary acts of individual testing and testing of equipment and process pipelines
- ✓ Acts of acceptance commissions
- ✓ Approved project documentation with all subsequent changes
- ✓ Energy passport in accordance with the legislation on energy conservation
- ✓ Technical passports of buildings, structures, technological units and equipment
- ✓ Executive working drawings of equipment and structures, the lines of the entire underground farm
- ✓ Executive process diagrams of primary and secondary electrical connections
- ✓ Executive working technical schemes
- ✓ Drawings of spare parts for equipment

- ✓ Operational firefighting plan
- ✓ A set of operating and canceled instructions for the operation of equipment, buildings and structures, job descriptions for all categories of professionals and workers relating to duty personnel, and instructions for safety and health. Approval of instructions on labor protection is carried out by the first head, and not by the technical manager
- ✓ The above documentation is stored in the technical archive of the power facility with the stamp "documents" and when the owner changes, it is transferred in full to the new owner, who needs to ensure its permanent storage.

Plates with nominal data are to be installed on the main and auxiliary equipment of power plants, according to the manufacturer's instructions for the equipment.

All main and auxiliary equipment, including pipelines, bus systems and sections, as well as fittings, gas and air ducts, must be numbered.

All changes in power plants made during operation are entered in the instructions, diagrams and drawings before commissioning, with the signature of the supervisor, indicating his/her position and the date of the change.

Technological diagrams (drawings) are checked for their compliance with the actual schemes (drawings) at least once every 3 years with a note on them for verification.

The sets of necessary schemes are located at:

- ✓ NDC SO of Kazakhstan
- ✓ RDC
- ✓ Electric network
- ✓ Head of the shift of the power plant, each shop and power unit
- ✓ The on-duty substation
- ✓ District electric network
- ✓ Masters of the operative-visiting brigade
- ✓ Repair personnel.

At each power facility a list of necessary instructions, regulations, technological and operational schemes for each workshop, substation, district, site, laboratory and service is established, which is approved by the technical director of the power facility.

All workplaces are supplied with the necessary instructions,⁷¹ compiled in accordance with the requirements of the Rules for the Technical Operation of Electric Power Stations and Networks approved by

⁷¹ The list of instructions requiring coordination is determined by the National Dispatch Center of Kazakhstan's system operator and the Regional Dispatch Center.

Order No. 247 of the Minister of Energy of the Republic of Kazakhstan dated March 30, 2015, based on plant and design data, standard instructions and other regulatory-technical, and test results, as well as local conditions.

Lists of instructions are reviewed once every three years. In the instructions for the operation of equipment, buildings and facilities, relay protection, telemechanics, communication and the complex of technical means of an automatic control system for each installation, the following are given:

- ✓ Brief description of the installation's equipment, buildings and structures
- ✓ Criteria and limits of the safe condition and operating modes of the plant or complex of installations
- ✓ The procedure for preparing for launch
- ✓ The procedure for starting, stopping and servicing equipment, and maintaining buildings and structures during normal operation and in case of violations in work
- ✓ The procedure for admission to inspection, repair and testing of equipment, buildings and structures
- ✓ Requirements for safety and labor protection, explosion and fire safety specific to each installation

The service instructions for each workplace include:

- ✓ List of instructions for servicing equipment, diagrams of equipment and devices, knowledge of which is necessary for employees in this position
- ✓ Rights, functions and duties of the employee
- ✓ Mutual relations with superiors, subordinates and other work-related staff

On-duty personnel have operational documentation, which is described in [Annex 23](#).⁷²

Daily statements must be kept on the workplace conditions of operational dispatch personnel in the plant's shops and on the control posts that require constant staff presence.

Administrative and technical personnel, in accordance with the established schedules for plant and equipment inspections should check the operational documentation and take the necessary measures to eliminate defects and violations in the operation of equipment and personnel.

11.7 Automated Control Systems

Automated control systems (ACS) provide industrial-

⁷² Depending on local conditions, the scope of operational documentation can be changed by decision of the technical director of the power facility

technological, operational-dispatching and organizational-economic management of energy production tasks. These tasks are assigned to:

- ✓ Automated process control systems of technological process
- ✓ Automated dispatch control systems (ADCS)
- ✓ Automated industrial control systems (AICS)

At each power plant and in every organization operating an electric network, depending on local conditions, and economic and production expediency, the ACS TP should function.

At the dispatch centers of organizations' operating electric networks, the united power network (UPN) and the unified power system (UPS) shall operate in the ADCS.

When operating the ACS, it is necessary to follow the instructions for operating the ACS.

Operative documentation, diagrams of recording instrumentation, records of operational dispatch negotiations, and output documents formed by the operational information system of the ACS are strictly documented and are subject to storage in the order established by law. For example, carriers with notes of recording instruments are stored for 3 years.

At power plants in organizations operating electric networks of the UPN and UPS, there should be AICS, the main task of which is reliable and economic management of production under market conditions.

The choice of complexes of separate ACS tasks at each power facility is determined based on production and economic feasibility, considering the rational use of existing standard design solutions, application packages and technical capabilities.

The composition of the complex of technical means of ACS:

- ✓ Means of information collection and transmission (information sensors, communication channels, telemechanics devices, data transmission equipment)
- ✓ Means of information processing and display (computers, analog and digital devices, displays, printing devices, functional keyboards)
- ✓ Means of control (controllers, executive machines, electrical equipment: relays, power amplifiers)
- ✓ Auxiliary systems (uninterruptible power supply, air conditioning, automatic fire extinguishing)

The ACS is put into operation in accordance with the established procedure based on an act of the State Acceptance Commission.

Commissioning of the ACS in commercial operation can be preceded by pilot operation lasting no more

than 6 months. The ACS can be created and put into operation in one or two stages.

Acceptance of ACS in commercial operation is performed upon the completion of acceptance into commercial operation of all tasks envisaged for the entered queue.

When organizing the operation of the ACS, the functions of the structural units for servicing the complex of technical means and software are determined by the orders of power facility managers.

The list of equipment serviced by each unit with an indication of the service boundaries is approved by the technical director of the relevant power facility or organization.

ACS service personnel, except for design and factory personnel, must maintain technical and operational documentation for the list approved by the technical manager of the power facility.

Repair and maintenance work on the technical means of the ACS are carried out in accordance with the approved schedules. The order of their withdrawal into repair is determined by the approved provision.

The power facility's dispatching office manager must analyze the functioning and effectiveness of the ACS, monitor its operation, and develop measures for improving the ACS and its technical re-equipment in a timely manner.

11.8 Measures for Metrological Support

At each power facility, a set of measures must be carried out to ensure uniformity and the required accuracy of measurements. The set of measures for metrological support performed by each power facility should include:

- ✓ Timely submission of verification of measuring instruments subject to state control and supervision
- ✓ Calibration of measuring instruments not subject to verification; use of certified measurement techniques; ensuring that the accuracy of the measuring instruments used complies with the requirements for the accuracy of measurements of technological parameters and metrological examination of design documentation
- ✓ Maintenance, repair of measuring instruments, and metrological control and supervision

The metrological services of power facilities and organizations or units performing these services should provide metrological support, control and supervision over their implementation.

The measuring instruments of power installations must comply with project documentation and technical

specifications. The volume of measuring instruments should provide control over the technical conditions of the equipment and their mode of operation; accounting for the arrival and consumption of resources generated, spent and released, electricity and heat; control over observance of safe working conditions and sanitary norms; and control over the protection of the environment.

All measuring instruments, as well as information and measuring systems, should be in working order and must constantly be ready to perform measurements.

At power facilities, process parameters are measured according to project design.

Measuring instruments and their accuracy are selected at the design stage based on state and industry documents establishing the requirements for the accuracy of measuring process parameters and measurement techniques.

11.9 Prevention of Accidents

All work on occupational safety and health must be aimed at creating a system of organizational measures and technical means designed to prevent the exposure of workers to hazardous production conditions.

Installation, operation and repair of equipment, buildings and structures of power facilities must meet the requirements of regulatory acts on occupational safety. Means of protection, adaptations and tools used in the maintenance of equipment, buildings and structures of power facilities, must be inspected and tested regularly in accordance with the current regulations on occupational safety.

The employer is obliged to:⁷³

- ✓ Take measures to prevent any risks in the workplace and in technological processes by taking preventive measures and replacing production equipment and processes with safer ones
- ✓ Train workers on occupational safety and health
- ✓ Carry out organizational and technical measures of safety and labor protection
- ✓ Provide guidance and documents on the safe conduct of the production process and work
- ✓ Organize the verification of knowledge of persons responsible for ensuring safety and labor protection, and workers in matters of safety and labor protection
- ✓ Create the necessary sanitary and hygienic conditions for the workers, ensure the issuance and repair of employee clothing and footwear, and

provide them with preventive treatment, detergents and disinfectants, a medical first aid kit, milk, medical and preventive nutrition, individual and collective protection equipment in accordance with the standards, established by the authorized body on work in coordination with the central authorized body for budget planning

- ✓ Provide the authorized state labor authority, local labor inspectorate, and employee representatives, upon their written request, with necessary information on the status of conditions, safety and labor protection, including information on the certification of production facilities for working conditions in organizations once a quarter
- ✓ Comply with the requirements of state labor inspectors
- ✓ Register, record and analyze accidents and occupational diseases at work
- ✓ Conduct, with the participation of employee representatives, periodic (not less than every five years), certification of production facilities for working conditions in accordance with the rules approved by the authorized labor authority
- ✓ Submit in a month's time on paper and electronic media the results of the certification of production facilities according to the working conditions of the relevant local labor inspectorate
- ✓ Ensure the investigation of accidents at work in accordance with the procedure established by the legislation of the Republic of Kazakhstan
- ✓ Insure the employee against accidents during the performance of his/her labor (official) duties
- ✓ Report on cases of acute poisoning to the appropriate territorial unit of the authorized state body for sanitary and epidemiological welfare of the population
- ✓ Ensure safe working conditions
- ✓ Conduct at his/her own expense obligatory, periodic (during labor activity) medical examinations and pre-medical examinations of employees in cases stipulated by the legislation of the Republic of Kazakhstan, as well as when transferring to another job with changes in working conditions or when signs of occupational disease appear
- ✓ Take measures to prevent the development of an emergency and the impacts of traumatic forces on other persons

⁷³ The employer's additional obligations may be provided by a labor or collective agreement, taking into account the specifics of activities and types of work, and the presence of increased danger.

- ✓ Develop instructions for work safety and have them approved at the enterprises:
 - For certain categories of workers
 - For certain types of work (work at height, installation, commissioning, repair, testing) in accordance with the requirements set out in regulations and instructions for safety and labor protection

General management of work on safety engineering is entrusted to the first head (employer) of the power facility.

Managers and officials of energy facilities and organizations should:

- ✓ Ensure safe and healthy working conditions at workplaces, in production facilities and on the territory of power facilities and organizations, and monitor their compliance with current safety and industrial sanitation requirements
- ✓ Organize regular training, knowledge assessments and briefs for personnel and monitor compliance with safety requirements

Production facilities are subject to obligatory periodic certification on working conditions.

Certification of production facilities' working conditions is carried out by specialized organizations at least every 5 years. The authorized state labor authority places information on the specialized organizations (name, legal address, contact phone number, activities and information on qualified personnel) on the Internet.

The procedure for carrying out mandatory periodic certification of production facilities with respect to working conditions is determined by the Rules for Mandatory Periodic Certification of Production Facilities with respect to working conditions.⁷⁴

To organize the certification of production facilities' labor conditions, the employer issues an appropriate order to establish a certification committee consisting of the chairman, members and secretary responsible for drawing up, maintaining and storing documentation on the certification of production facilities' working conditions.

The composition of the certification committee of the organization includes the head or his deputy, specialists of the security and labor protection services and structural units of the organization as agreed upon, as well as representatives of employees.

⁷⁴ Order No. 374 of the Minister of Labor and Social Protection of the Population of the Republic of Kazakhstan dated November 7, 2017, On Amending the Order of the Minister of Health and Social Development of the Republic of Kazakhstan No. 1057 dated December 28, 2015, On Approval of the Rules for Mandatory Periodic Attestation of Working Conditions at Production Facilities.

The certification commission of the organization carries out internal control in the organization for the quality of certification of production facilities.

Buildings (structures) in which workplaces are located should correspond to their functional purpose and to the requirements of safety and labor protection.

Operating equipment must comply with the safety standards established for this type of equipment, have appropriate technical certificates (data sheet), warning signs, and be provided with fences or protective devices to ensure the safety of workers.

Emergency routes and exits from the premises should remain free and lead to the open air or to a safe area. Hazardous areas should be clearly marked.

The design and operation of equipment, buildings and structures must comply with the requirements of the Fire Safety Regulations⁷⁵ and the Fire Safety Regulations for Power Enterprises.⁷⁶

Power plants can be started up only after all work on basic and auxiliary equipment is completed: cleaning of mechanization facilities, appliances, dismantled equipment, waste and materials from workplaces; and restoration of insulation of steam pipelines, fire safety and workplace safety.

Before starting up the power plant, the personnel must:

- ✓ Check documentary readiness (closing of orders, availability of corresponding records in register, etc.)
- ✓ Inspect equipment (operating and standby), and if necessary, turn it on idle for the time required to determine its readiness for normal operation
- ✓ Check the availability of technological protections, interlocks, control devices and instrumentation
- ✓ Check the availability of fire protection, as well as the availability and serviceability of casings, insulation, etc

Based on the Fire Safety Regulations for energy companies, for each factory workshop, laboratory, workshop, warehouse, administrative premises and other facilities, energy enterprises must develop an instruction on fire safety measures.

Instructions on fire safety measures are posted in a conspicuous place and periodically reviewed based on of an analysis of fire risks at the facility, but at least once every three years.

Instructions for fire safety in factory workshops,

⁷⁵ The Resolution of the Government of the Republic of Kazakhstan dated October 9, 2014, No. 1077, On Approval of the Fire Safety Rules.

⁷⁶ Order of the Minister of Energy of the Republic of Kazakhstan dated February 20, 2015 No. 123, On Approval of the Fire Safety Rules for Energy Utilities.

laboratories, workshops, warehouses and other production and auxiliary facilities are developed by the management of these units, coordinated with the fire service (if it is available at the enterprise) and approved by the chief technical manager of the enterprise.

In accordance with the Fire Safety Regulations approved by the Resolution, an operational firefighting plan is being developed and approved at power plants.

Heads of energy enterprises periodically check the readiness of the facility's fire service and voluntary fire units and take the necessary measures to improve their work.

Wind power plants should provide for the protection of maintenance personnel from electric shocks and from injury by rotating and moving parts when climbing on internal or external ladders.

Current-carrying conductors and grounding systems should be installed according to ST RK 1295-2004. The requirements for grounding devices and protective conductors must comply with GOST R 50571.10-96.

All open conductive parts of electrical equipment that may carry dangerous voltage due to insulation damage must be electrically connected to the unit body and the tower.

The electrical equipment of the WPP shall have grounding clamps for connection of the zero protective and zero working conductors, as well as grounding marks, performed in accordance with GOST 12.2.007.0.75.

Electrical insulation of current-carrying parts of electrical equipment of windmill electric circuits with nominal voltage 230 and 400 V must withstand without damage for 1 min a sinusoidal voltage of 1500 and 1800 V, respectively, with a frequency of 50 Hz.

The resistance of the electrical isolation of separate individual power circuits with a voltage of 230 and 400 V between themselves and with respect to the housing in a cold state should be not lower than 20 megohms, while in a hot state, not lower than 3 megohms.

The WPP must meet fire safety requirements in accordance with GOST 12.1.004.-91.

Additional requirements for protection against lightning should be indicated in the technical specifications and operating instructions for a specific type of WPP. When designing WPP protection systems against lightning, it is recommended that the design be guided by the requirements of

- ✓ International Electrotechnical Commission Standard 61024-1:1990

- ✓ International Electrotechnical Commission Standard 61024-1-1:1993

- ✓ International Electrotechnical Commission Standard 61024-1-2:1998⁷⁷

11.10 Environment Protection

During the operation of power plants, measures are taken to prevent or limit the harmful impacts of pollutants emitted into the atmosphere and/or discharged into water bodies, noise, vibration, electric and magnetic fields and other harmful physical impacts, and to reduce irreversible losses and volumes of water consumption.

The amount of pollutants emitted into the atmosphere should not exceed the norms of maximum permissible emissions (limits), and discharges into water bodies should not exceed the norms of maximum permissible or temporarily agreed discharges.

The intensity of the electric and magnetic fields should not exceed maximum permissible levels, while noise impacts should not exceed the norms for the acoustic output of equipment.

WPPs should be located away from the paths of migratory birds. To avoid bird deaths, acoustic beacons should be installed on operated WPPs to frighten the birds away.

The sound level created by a single WPP at a distance of 50 m from a wind-power unit at a height of 1.5 m from the ground level should not exceed 60 dBA.

In residential and public premises near the WPP in all cases, the sound level of a working WPP should not exceed 60 dBA, infrasound: 100 dB in accordance with the requirements of SNiP II-12-77.

The requirements for electromagnetic compatibility of electrical equipment that is part of the WPP shall be established in standards and specifications for specific types of WPPs and comply with the requirements of GOST R 51317.6.1-99 and GOST R 51317.6.3-99.

11.11 Requirements for Industrial Safety and Equipment Certification

Equipment Certification

The electro-technical equipment and materials produced in the Republic of Kazakhstan, as well as imported into its territory must comply with the requirements established by technical regulations, and in cases stipulated by the legislation of the Republic of Kazakhstan, must undergo a conformity assessment.

Electrical equipment and materials must meet the requirements to ensure the safety, health, and lives of

⁷⁷ ST RK GOST R 51991-2008.

humans and the environment.

The commissioning of power plant equipment, electric and heat networks, and consumer installations, which are subject to a confirmation of compliance with the requirements of technical regulations, is not allowed without a conformity assessment.

In the the agreement concluded for the supply of imported products, which are subject to mandatory confirmation of compliance, an obligation to confirm compliance must be provided.⁷⁸

The certification procedure is a written confirmation by the authorized body of the equipment's conformance with the requirements established in regulatory documents by issuing a certificate of compliance⁷⁹ which states:

- ✓ Name and location of the applicant, the manufacturer (executor) of the product, and the body that issued the certificate of conformity
- ✓ Name of the certified product, which allows its identification
- ✓ Name of the technical regulation, for compliance with the requirements of which certification was carried out
- ✓ Information on the research (tests) and measurements conducted
- ✓ Information on documents submitted by the applicant to the conformity assessment body as evidence of conformity of products to the requirements established by technical regulations
- ✓ Period of validity of the certificate

The certificate of conformity⁸⁰ is subject to registration with the body that confirms compliance.

The certificate of conformity for serial production is issued for a period established by the scheme of confirmation compliance.

The validity of the certificate of conformity extends throughout the territory of the Republic of Kazakhstan.

Importing or selling products that did not pass the compliance confirmation is prohibited.

Authorized bodies that carry out certification in the Republic of Kazakhstan are:

- ✓ Authorized body for standardization, metrology and certification is the Committee for Technical

Regulation and Metrology of the Ministry of Investments and Development of the Republic of Kazakhstan (GosStandart)⁸¹

- ✓ Accredited bodies on certification of products, processes, works and services⁸²
- ✓ Accredited testing laboratories (centers)
- ✓ Accredited conformity assessment bodies (expert certification auditors)

At present two systems of technical regulation operate simultaneously in the territory of the Republic of Kazakhstan: the state system of technical regulation and the system of technical regulation of the Customs Union. For this reason, there are also two lists of products subject to mandatory certification (conformity assessment):

- ✓ In the territory of Kazakhstan: the national List of products and services subject to mandatory certification (Decree of the Government of the Republic of Kazakhstan dated April 20, 2005 No. 367)
- ✓ In the territory of the Customs Union: the unified list of products subject to mandatory conformity assessment and the issuance a uniform form documents (Decision of the Commission of the Customs Union dated April 7, 2011 No. 620)

Products subject to the technical regulations of the Customs Union must be accompanied by a Single Certificate of Conformity or a Single Declaration of Conformity with a single sign of circulation of EAC products. Products included in the Unified List may also be accompanied by a Single Certificate of Conformity or a Single Declaration of Conformity (there can be no single sign on these documents).

If the products included in the Unified List are accompanied by a certificate of conformity issued in the national system of technical regulation of Russia and Belarus, then the products must undergo the procedures of confirming compliance under national legislation, and conformity certificates must be reissued for Kazakhstan-type certificates.

Products not subject to the technical regulations of the Customs Union and not included in the Unified List are subject to mandatory assessment (confirmation) of compliance in accordance with national legislation of the Republic of Kazakhstan.

The products are accompanied by a certificate of

⁷⁸ Certificates of conformity of foreign countries, product test protocols, and conformity marks are recognized in accordance with international treaties or concluded agreements with international or regional non-state and non-governmental organizations for accreditation.

⁷⁹ GosStandart RK.

⁸⁰ The form and procedure for issuing a certificate of conformity is established by Standard ST RK 3.4-2008, State System of Technical Regulation of the Republic of Kazakhstan, Forms of Certificates of

Conformity, Declarations of Compliance and Procedure for their Completion.

⁸¹The website of the committee: <http://www.memst.kz/contacts/>

⁸² According to Government Resolution dated August 27, 2008, No. 773, the National Accreditation Center LLP is defined as the accreditation body of the Republic of Kazakhstan.

conformity issued in the GOST R system; such a certificate of compliance must be re-registered with a Kazakhstan's certificate.⁸³

Resolution of the Authorized Body for Industrial Safety

Hazardous production facilities include dangerous technical devices:⁸⁴

- ✓ Technical devices operating under pressure more than 0.07 megapascal or at a water heating temperature of more than 115° Celsius
- ✓ Load-lifting mechanisms, escalators, cable cars, funiculars and elevators

Hazardous production facilities and equipment are subject to supervision by the government body for industrial safety: the Committee for Industrial Development and Industrial Safety of the Ministry of Investment and Development of the Republic of Kazakhstan.

The following are subject to industrial safety examination:

- ✓ Hazardous technical devices
- ✓ Technologies, technical devices, and materials used at hazardous production facilities, with the exception of construction materials
- ✓ Declaration of industrial safety of a hazardous production facility
- ✓ Industrial buildings and technological facilities of hazardous production facilities
- ✓ Legal entities for compliance with the declared types of work and industrial safety requirements when obtaining a certificate

Industrial safety examinations are carried out by certified organizations that are independent of the applicant organization, at the expense of the applicant.

The result of an expert examination of industrial safety is an expert report.

The authorized industrial safety body is the Ministry of Investment and Development of the Republic of Kazakhstan,⁸⁵ whose competence includes, inter alia, issuing permits for the use of technologies, technical devices, materials used in hazardous production facilities and hazardous technical devices.

⁸³ Source: information posted on the website of National Center for Expertise and Certification JSC, link to: <http://naceks.kz/ru/informirovan-vooruzhen/220-o-sertifikazii-v-usloviyach-tamozhennogo-soyuza.html>.

⁸⁴ According to the Law of the Republic of Kazakhstan On Civil Protection, dated April 11, 2014, No. 188-U LRK.

⁸⁵ Resolution of the Government of the Republic of Kazakhstan dated September 19, 2014, No. 995, On Some Issues of the Ministry of Investments and Development of the Republic of Kazakhstan.

⁸⁶ Standard of Public Service, Issuance of Permits for the Use of Technologies, Technical Devices, Materials Used at Hazardous Production Facilities and Hazardous Technical Devices."

To obtain permission to use technologies, technical devices, materials used in hazardous industrial facilities and dangerous technical devices, including those of foreign origin, the applicant submits to the authorized agency in the PSC or the web portal egov.kz:⁸⁶

- ✓ Application with brief information on the use of technologies, technical devices, materials used in hazardous production facilities, and hazardous technical devices, and the field of their application
- ✓ Expert conclusions on the compliance of these technologies, technical devices, materials used in hazardous industrial facilities and hazardous technical devices with industrial safety requirements
- ✓ The document proving the identity (in case the documents are submitted through the PSC)

Permission is granted within 15 calendar days if the technologies, technical devices, and materials used at hazardous industrial facilities comply with industrial safety requirements.⁸⁷

When inconsistencies are detected for technologies, technical devices and materials used at hazardous industrial facilities and hazardous technical devices with industrial safety requirements, the permit for their use is revoked by the authorized industrial safety body.

To register and remove a dangerous technical device, the head of an organization operating the device submits an application to the territorial subdivision of the authorized industrial safety body: the Committee for Industrial Development and Industrial Safety of the Ministry of Investments and Development of RK.

The application specifies the reason for identifying a dangerous technical device for registration or its removal from the register.

The deadline for registration/removal of a dangerous technical device is 10 working days from the date the application is filed, with the issuance of a notification of registration or removal from the register of a dangerous technical device.

11.12 Responsibility for Non-Compliance with Technical Regulation Legislation

Individuals and legal entities (manufacturers, executors, sellers) take administrative and civil responsibility for:

⁸⁷ Information on technologies, technical devices, materials used at hazardous industrial facilities, and hazardous technical devices approved for use in the territory of the Republic of Kazakhstan is posted on the site of the Committee for Industrial Development and Industrial Safety of the Ministry of Investment and Development of RK: <http://comprom.mid.gov.kz/ru/kategorii/informaciya-po-vydannym-razresheniyam>

- ✓ The safety of products sold on the market
- ✓ Violation of requirements established by technical regulations
- ✓ Failure to comply with the regulations and decisions of the body exercising state control

Article 415 of the Administrative Offences Code establishes administrative liability for violations of the legislation of the Republic of Kazakhstan on technical regulation, in the form of:

- ✓ Issue and sale of products that do not meet the requirements of technical regulations
- ✓ Issue to wholesale or retail trade and markets of products that do not meet the requirements of the normative document on standardization
- ✓ Import and/or sale of products subject to mandatory compliance confirmation, without the presence of a certificate of compliance: a mark or declaration of conformity. In the case of forgery: the expiration or suspension of validity
- ✓ Violations of the procedure for carrying out work to verify compliance and accreditation

- ✓ Unjustified issuance or confirmation of the validity of the compliance certificate, as well as unreasonable acceptance or registration of a declaration of conformity, declaration-statement

For the listed violations the following fines are provided:

- ✓ for individuals 30 MCI
- ✓ for small businesses or non-profit organizations 65 MCI
- ✓ for medium-sized business 100 MCI
- ✓ for large business 200 MCI, with the suspension of the certificate of accreditation and certificates of experts-auditors on the confirmation of compliance and accreditation for a period of six months

Damage caused to the life, health or property of a citizen, or property of a legal entity as a result of product non-compliance with technical regulations shall be compensated in accordance with the Civil Code of the Republic of Kazakhstan.⁸⁸

⁸⁸ Article 947-950 of the Civil Code of the Republic of Kazakhstan.

12. TERMS AND DEFINITIONS

Applicant – A legal entity planning to participate in an auction.

Auction – The electronic process organized and conducted by the auction organizer to select projects for the construction of facilities using renewable energy sources. The auction also determines the prices for the electric energy produced by the renewable energy facilities, taking into account the RE facilities siting plan.

Auction organizer – A legal entity, determined by the authorized body, that organizes and conducts auctions in accordance with the procedure provided by law.

Auction price – The price at which the financial settlement center purchases the electric energy produced by renewable energy facilities. The price is determined based on auction results and does not exceed the level of the corresponding ceiling auction price.

Auction schedule – The schedule of auctions for a calendar year developed by the authorized body according to the established form. The information specified in the auction schedule is not subject to adjustment.

Authorized body – A central executive body that administers and provides intersectoral coordination to support the use of renewable energy sources.

Bank guarantee – A written document, executed in accordance with the rules for issuing bank guarantees and sureties by second-tier banks, approved by the Resolution of the Management Board of the National Bank of the Republic of Kazakhstan as of January 28, 2017, No. 21 (registered in the Register of State Registration of Regulatory Legal Acts under No. 14915) and issued by a bank to a client (a debtor) on the basis of his/her application in favor of a third person (creditor), under which the bank undertakes to pay a limited amount of money to the third person (creditor) under the conditions specified therein.

Beneficiary – A person who derives advantage from a payment and/or money transfer.

Ceiling auction price – The maximum value of the auction price for electric energy.

Energy producing organization that uses renewable energy sources – A legal entity that produces electric and/or thermal energy with the use of renewable energy sources.

Grid connection point – The place where the energy producing organization's renewable energy facility physically connects with the energy transmission organization's electric grid.

Land use design – The scheme (plan) of a land plot, including information on the area of the land plot, its boundaries and location, on the adjacent land owners and land users, and on land plots' encumbrances and easements.

Minimum permissible volume of installed capacity – The capacity volume below which the participant is not ready to implement the construction of a new renewable energy facility.

Power purchase agreement (PPA) – The contract for the purchase of electricity from an energy producing organization that uses renewable energy sources, at auction prices signed between the organization and the financial settlement center.

Ranked schedule – The list of bids of the auction participants arranged in ascending order of bid prices.

Register of auction winners – a document compiled by the auction organizer at the end of the auction confirming the results of the auction.

Renewable energy facility – Technical devices intended to produce electric and/or thermal energy using renewable energy sources and their associated structures and infrastructure which are technologically necessary for the operation of the renewable energy facility and are on the books of the renewable energy facility owner.

Renewable energy sources – Energy sources that are continually replenished by natural processes, including the energy of sunlight, wind energy, hydrodynamic energy of water, geothermal energy (heat of the ground, ground water, rivers, and basins), and anthropogenic sources of primary energy (biomass, biogas and other fuel derived from organic waste) used to produce electric and/or thermal energy.

Reserve fund – A fund established by the financial settlement center to support renewable energy sources. This money is kept in a special bank account and is used only to cover the financial settlement center's cash deficiencies and debts to energy producing organizations that use renewable energy sources, that occur due to a failure to pay or late payment by conditional consumers for the electric energy produced by the renewable energy facilities.

Sanitary protection zone – A territory that separates special-purpose zones, as well as industrial organizations and other industrial, utility and warehouse facilities in a locality from nearby residential areas, housing and public buildings and structures to mitigate adverse impacts on them.

Standby letter of credit – A bank's obligation to pay the beneficiary of the letter of credit a certain amount upon the occurrence of an event (failure of the debtor to fulfill his/her obligations to the beneficiary). The

standby letter of credit is issued with the SWIFT system.

System operator is a national company (JSC Kazakhstan Electricity Grid Operating Company, KEGOC) – the organization that implements centralized operational and dispatch control, ensures parallel operation with the power systems of other states, maintains balance in the power system, provides system services, procures auxiliary services from the wholesale electric energy market players, and transmits electric energy through the national electric grid, maintains it, and ensures its operational readiness.

Tariff for the support of renewable energy sources – A tariff for the financial settlement center's sale of electricity produced by renewable energy facilities set by the financial settlement center in accordance with the rules for determining tariffs for the support of renewable energy sources approved by the authorized body.

Trading session – A process during which auction participants submit their bids, prices and auction volumes are determined, and the register of auction winners is generated.

Trading system – A complex of organizational, technical and software components that enable auctions via the Internet.

Unilateral auction – A form of auction where the winners are determined by successive selection of auction participants' bids from the ranked schedule of auction participants.

13. ANNEXES

ANNEXES TO CHAPTER I

ANNEX I

STANDARD FORM CONTRACT FOR THE IMPLEMENTATION OF AN INVESTMENT PROJECT, WHICH PROVIDES FOR INVESTMENT AND THE PROVISION OF INVESTMENT PREFERENCES

Nur-Sultan _____ (day, month, year)

This investment contract for the implementation of an investment project, which provides for investment and the provision of investment preferences, is concluded by _____ (name of the authorized body) represented by

_____,
(Surname, name and patronymic of the head or acting head of the body) acting pursuant

to _____ (statute or order) (hereinafter – authorized body)

and,

performing _____

(Name of the legal entity of the Republic of Kazakhstan, number, date of state registration)

Implementation of the investment project, represented by

(Surname, name and patronymic of the top manager or other authorized person)

acting pursuant to (charter of power of attorney) (hereinafter – Investor), jointly referred to as Parties.

Whereas:

- 1) The legislation of the Republic of Kazakhstan on entrepreneurship, based on the Constitution of the Republic of Kazakhstan, identifies as one of the directions the creation of a favorable investment climate for economic development and stimulation of investments in the creation of new, expansion and/or modernization of existing production facilities using modern technologies, building the capacity of local staff and protecting the environment;
- 2) Authorized body has the rights, directly related to concluding and controlling the performance under the investment contract;
- 3) Authorized body and investor have agreed that an investment contract will regulate their mutual rights and responsibilities in the implementation of

Name of investment project:

the authorized body and investor have concluded this investment contract, on the following.

I. Main terms

Paragraph I is changed in line with the Resolution of the Government of the RK dated 27.07.18, No. 468 (see old version.)

I. Main terms, used in this investment contract:

- 1) Investment contract – an agreement for the implementation of an investment project that provides for investment and investment preferences;
- 2) Revenues – income derived from or associated with investment activities, regardless of the form in which they are paid, including profits, dividends and other fees;
- 3) Intangible assets – intangible objects used for a long-term period (more than one year) to obtain total annual income;
- 4) Force majeure – circumstance of insuperable force, complicating the course or leading to the impossibility of further fulfillment of the investment contract (military conflicts, natural disasters, acts of God, etc.)
- 5) Third party – any entity that is not a Party to the investment contract;
- 6) Working program – Annex I to the investment contract, which identifies the schedule for implementation of the investment project until its commissioning;
- 7) Investment project – a set of measures that includes investments in the creation of new, and expansion and/or

modernization of existing production facilities, including facilities created, expanded and/or modernized during the implementation of the public-private partnership project, including the concession project;

8) A priority investment project is an investment project for the:

creation of new production facilities, entailing investments by the legal entity in the construction of new production facilities (factory, plant, or unit) in the amount of not less than two million monthly calculation indices established by the law on the republic's budget and acting as of the date of filing of an application for investment preferences;

expansion and/or modernization of existing production facilities, entailing investments by the legal entity in the amount of not less than five million monthly calculation indices established by the law on the republic's budget and acting as of the date of filing an application for investment preferences in the modernization of fixed assets (renovation, reconstruction, modernization) of existing production facilities.

9) An investment subsidy is a type of budget subsidy granted as an investment preference on a non-repayable and irretrievable basis to a legal entity of the Republic of Kazakhstan that has concluded an investment contract that provides for an investment of at least five million monthly calculation indices, which are established by the law on the republic's budget and effective as of the filing date of the application on the provision of investment preferences and implementation of the priority investment project.

2. Subject of the investment contract

2. The subject of this investment contract is to provide the investor with investment preferences stipulated by the legislation of the Republic of Kazakhstan on entrepreneurship, within the framework of the investment project.

Paragraph 3 includes changes introduced by the Resolution of the Government of the RK dated 27.07.18. No. 468 (see old version).

3. Investor:

1) Under the investment, the project (including priority investment projects) enjoys the following types of investment preferences:

Exemption from customs duties when importing technical equipment and components to it for a period of _____ according to Annex 2 to this investment contract;

Exemption from customs duties when importing spare parts for technical equipment, raw materials and/or materials for a period in accordance with Annex 3 to this investment contract;

Exemption from value added tax for the import of raw materials and/or materials for the period _____ according to Annex 4 to this investment contract;

State in-kind grant in the form of: _____ on the right to _____ with subsequent _____, in the case of fulfilling investment obligations in accordance with the investment contract;

2) The following types of investment preferences are provided under the priority investment project:

Tax preferences:

For the creation of new industrial enterprises:

reduction of corporate income tax on income derived from the implementation of priority activities specified in the investment contract in the amount of 100 percent, starting from January 1 of the year in which an investment contract was concluded for the implementation of the priority investment project and ending no later than ten consecutive years, which are calculated starting from January 1 of the year following the year in which the investment contract for the implementation of the priority investment project was concluded;

For expansion and/or modernization of existing industrial enterprises:

reduction of corporate income tax on income derived from the implementation of priority activities specified in the investment contract in the amount of 100 percent, starting from January 1, following the year in which the last fixed asset was commissioned, which manufactures products under the investment contract for the priority investment project and ending no later than three consecutive years, which are calculated starting from January 1 of the year following the year in which the last fixed asset was commissioned, which manufactures products under the investment contract for the priority investment project;

for expansion and/or modernization of existing industrial enterprises with stage-by-stage commissioning of fixed assets for manufacturing products, stipulated in the investment contract for implementation of priority investment projects:

reduction of corporate income tax on income derived from the implementation of priority activities specified in the investment contract in the amount of 100 percent, starting from January 1, following the year in which the fixed asset was commissioned, which manufactures products under the investment contract for the priority investment project and ending no later than three consecutive years, which are calculated starting from January 1 of the year following the year in which the fixed asset was commissioned, which manufactures products under the investment contract for the priority investment project;

the application of a 0 percent rate to the rates of land tax for a period of ___ years, from the 1st day of the month in which the investment contract was concluded, and not later than ten consecutive years, which are calculated starting from January 1 of the year following the year in which the investment contract for the implementation of the priority investment project was concluded;

Calculation of property tax at a rate of 0 percent to the tax base for a period of ___ years, from the 1st day of the month in which the first asset was accounted for as part of fixed assets in accordance with international financial reporting standards and the requirements of the legislation of the Republic of Kazakhstan on accounting and financial reporting; no later than eight consecutive years, which are calculated starting from January 1 of the year following the year in which the first asset was accounted for as part of fixed assets in accordance with international financial standards and the requirements of the legislation of the Republic of Kazakhstan on accounting and financial reporting;

Investment subsidy for the implementation of the priority investment project after the commissioning of production in full in accordance with the decision of the Government of the Republic of Kazakhstan in line with the schedule and annual volumes, in accordance with Annex 5 to this investment contract, provided that the investor fulfills the obligations under the investment contract.

3. Purpose of the investment contract

This investment contract establishes the legal framework for the contractual relationship between the authorized body and the investor in accordance with applicable law to provide investment preferences in the implementation of

_____ (Investment or priority investment project) and performing

_____ (Name of priority activity type)

4. Object of investment activity

5. Investment activity object under this contract is

_____ Name of the investment project, located at

_____ Including: (address)

Investments into fixed assets:

No.	Cost items	Amount without value added tax (thousands KZT)
Investments into fixed assets		
1		
2		
Investments into intangible assets		
3		
4		
	Total:	

5. Rights of the Parties

6. The authorized body has the right to:

1) within the delegated authority representing the Republic of Kazakhstan during negotiations with the investor;

- 2) determine the conditions and the procedure for concluding and terminating an investment contract, and concluding and registering an investment contract;
- 3) control the implementation of the investment project, including requiring the investor to report regularly in accordance with paragraphs 19, 20 and 21 of this investment contract for the fulfillment of the terms of the investment contract, and to request other information relating to the investment project;
- 4) assist in ensuring the guaranteed order specified in Annex 6 to this investment contract by interested legal entities;
- 5) other, stipulated by the regulation on the authorized body and legislation of the Republic of Kazakhstan.

7. The investor has the right to:

- 1) take any actions that do not contradict the terms of the investment contract and the current legislation of the Republic of Kazakhstan, for the implementation of the investment project;
- 2) at its own discretion, use the income received from its activities after payment of taxes and other mandatory payments to the budget in accordance with the legislation of the Republic of Kazakhstan;
- 3) open bank accounts in the national currency and/or foreign currency in banks in the territory of the Republic of Kazakhstan in accordance with the banking and currency legislation of the Republic of Kazakhstan;
- 4) attract foreign labor for the implementation of the priority investment project following the list of occupations and numbers in accordance with Annex 7 to this investment contract.

6. Responsibilities of the Parties

8. The authorized body within its competence undertakes:

- 1) by means of concluding this investment contract, to provide investment preferences;
- 2) to assist in the settlement of investment disputes with the participation of the investor in the pre-trial manner.

9. The investor undertakes to:

- 1) carry out the investments specified in clause 5 of this investment contract and to commission fixed assets in accordance with the work program;
- 2) comply with the provisions of this investment contract when implementing an investment project;
- 3) not change the type of activity specified in clause 4 of this investment contract and not violate the terms of the investment project for which investment preferences were granted;
- 4) introduce continuous training systems for Kazakh specialists and carry out work to improve their skills;
- 5) provide information on the implementation of the investment project requested by the authorized body and comply with the deadline for submitting reports in accordance with paragraphs 19, 20 and 21 of this investment contract;
- 6) during the term of the investment contract, not alienate or change the purpose of the state full-scale grant and property acquired in accordance with the work program of the investment contract;
- 7) during the validity of the investment contract, use spare parts for technical equipment, raw materials and/or materials imported in accordance with Annex 3 to this investment contract for carrying out the activities specified in clause 4 within the framework of this investment contract;
- 8) that within five years from the date of registration of the investment contract, the state and/or the subject of the quasi-public sector is obliged to withdraw from the founding members (or) participant (shareholder) of the legal entity of the Republic of Kazakhstan.

7. Taxes and duties

10. The investor undertakes to pay taxes and other mandatory payments to the budget in accordance with the current tax legislation of the Republic of Kazakhstan.

8. Force majeure

11. Neither Party shall be liable for any failure to fulfill any obligations under the investment contract if such failure or delay in performance is caused by insurmountable circumstances (hereinafter, force majeure).

12. Force majeure includes military conflicts, natural disasters, acts of God (fires, major accidents, disruption of communications, etc.) and other extraordinary circumstances that are unavoidable.

13. In case of full or partial suspension of works under an investment contract caused by force majeure circumstances, the period for carrying out these works is extended, by making changes to the work program for the duration of the force majeure and resumes from the moment of the termination of force majeure.

14. In the event of force majeure circumstances, the Party affected by them shall notify the other Party within 15 working days from the date of their occurrence by giving written notice specifying the date of the beginning of the event and describing the force majeure circumstances.

15. In the event of force majeure circumstances, the Parties shall immediately conduct negotiations to find a solution to the current situation and use all means to minimize the consequences of such circumstances.

9. Confidentiality

16. In accordance with the legislation of the Republic of Kazakhstan, parties observe the confidentiality conditions (according to clause 17 of this investment contract) for all documents, information and reports related to the work on the implementation of this investment contract, during the period of its validity.

17. Neither Party, without the written consent of the other Party, shall have the right to disclose information relating to the content of the investment contract or other information considered confidential and related to the implementation of the investment project, except for the following cases, when:

1) information is used in course of judicial proceedings;

2) information is provided to third parties providing services to one of the Parties of the investment contract, provided that such third party assumes the obligation to comply with the confidentiality of such information and use it only for the purposes established by the Parties and for the period specified by the Parties;

3) information is provided to a bank or other financial organization from which the Party receives investment funds under the investment contract, provided that such bank or financial institution assumes the obligation to comply with the confidentiality of such information;

4) information is provided to the tax authorities or other authorized state bodies of the Republic of Kazakhstan who have access to any information, including bank secrecy, relating to any bank accounts of the investor, including those opened with foreign banks outside the Republic of Kazakhstan;

5) the authorized body publishes in the mass media regulatory legal acts relating to the implementation of the investment project under which the investment contract is concluded. At the same time, the authorized body is entitled to publish only information on the amount of investments, the region of implementation, the number of jobs created and the name of the investment project.

10. Control over compliance with the terms of the investment contract

18. Control over compliance with the terms of the investment contract is carried out by the authorized body in the following forms:

1) in-house audit – control exercised by an authorized body based on the examination and analysis of reports submitted in accordance with paragraphs 19, 20 and 21 of the present investment contract;

2) site visits to the object of investment activities, including consideration of the documents on the execution of section I of the work program and conditions of the investment contract.

19. After the conclusion of the investment contract, the investor submits semi-annual reports on the implementation of the investment contract, no later than July 25 and January 25, in accordance with the form established by the authorized body, with the explanation of cost items stipulated in the work program, with the documents confirming the commissioning of fixed assets, and the use of spare parts for process equipment, raw materials and/or material.

20. To confirm the condition for the exit of the state and/or a quasi-public sector entity from the list of founding members and/or participants (shareholders), the investor submits to the authorized body a copy of the charter, certified by the signature of the head and the investor's seal (if any), within thirty calendar days after expiry of the term for leaving the list of the founding members (or) participants (shareholders) of a legal entity of the Republic of Kazakhstan.

Paragraph 21 is set out in the version of the Resolution of the Government of the Republic of Kazakhstan dated 27.07.18, No. 468 (see old version)

21. After the completion of the work program, a legal entity of the Republic of Kazakhstan that has concluded an investment contract within two months submits to the authorized investment body an audit report that must contain the following:

- 1) information on the performance of investment obligations under the work program;
- 2) details of fixed assets acquired in accordance with the work program;
- 3) a consolidated register of documents confirming the implementation of the work program;
- 4) information on the fulfillment of the terms of the investment contract.

If the investment contract provides for the granting of an investment subsidy, a legal entity of the Republic of Kazakhstan that has concluded an investment contract within two months submits to the authorized body an audit report of the audit firm that meets the minimum requirements established by the body authorized for audit activities.

22. Changes in the annexes to the investment contract may be made by agreement of the Parties once a year.

23. The inspection, with a visit to the investment activity site, is carried out within six months after the commissioning of fixed assets subject to the completion of the work program.

24. Based on the results of the inspection, the representative of the authorized body and the head of the investor sign, according to the form established by the authorized body, the act of the current state of execution of the work program of the investment contract.

25. If the investor fails to fulfill its obligations under the investment contract and if the investor fails to provide documents substantiating the possibilities for further implementation of the investment project, the authorized investment body shall terminate the investment contract early and unilaterally within three months from the date of the notification.

In case of termination of the investment contract, the said legal entity pays the amount of taxes and customs duties not paid to the budget as a result of investment preferences granted under the investment contract.

In case of termination of the investment contract, the legal entity of the Republic of Kazakhstan shall refund in full the amount of the investment subsidy paid under the investment contract.

26. In the event that, based on the results of the inspection conducted by the authorized body, it is established that technical equipment, components, spare parts imported for the implementation of the investment project and exempt from customs duties, raw materials and/or materials were not put into operation or not were used, the investor, who did not pay the amount of customs duties due to investment preferences granted under the investment contract, pays them in part of unused equipment, components, spare parts, raw materials and/or other materials.

27. In case of non-fulfillment of the condition on the exit of the state and/or the subject of the quasi-public sector from the founding entities and/or participant (shareholder), the application of investment preferences shall be suspended until he (they) fully exit from the list of founding members and/or participants (shareholders) of the legal entity of the Republic of Kazakhstan for a period of not more than one year.

Failure to fulfill the conditions for leaving the founding members and/or the participants (shareholders) of the legal entity of the Republic of Kazakhstan during the suspension period entails the early termination of the investment contract and the return of previously granted investment preferences.

28. Information on the termination of the investment contract for protecting the economic interests of the state is sent to the following bodies:

- 1) to the state revenue bodies, and when necessary, to other government bodies, which will take proper measures;
- 2) under investment contracts, according to which a state in-kind grant was granted, to state revenue bodies, authorized bodies for managing state property and/or land resources, as well as local executive bodies.

11. Dispute resolution

29. The Parties will make every effort to resolve all disputes and disagreements related to the implementation or interpretation of any of the provisions of the investment contract, by negotiating with each other.

30. If the Parties do not reach agreement within two months from the date of receipt of a written request by either Party to the other Party, dispute settlement may be conducted in the judicial bodies of the Republic of Kazakhstan, as well as international arbitrations determined by the agreement of the Parties.

31. The parties are not exempted from the fulfillment of the obligations established by the investment contract until the disputes and disagreements are fully resolved.

12. Investment contract stability guarantees

32. The investor is granted full and unconditional protection of rights and interests, which is ensured by the

Constitution of the Republic of Kazakhstan, this Cod and other normative legal acts of the Republic of Kazakhstan, as well as international treaties ratified by the Republic of Kazakhstan.

33. The investor has the right to compensation for damage to him as a result of the issuance by government bodies of acts that do not comply with the laws of the Republic of Kazakhstan, as well as illegal actions (inaction) of officials of these bodies in accordance with the civil legislation of the Republic of Kazakhstan.

34. The Republic of Kazakhstan guarantees the stability of the terms of contracts concluded between investors and state bodies of the Republic of Kazakhstan, except for cases when amendments to contracts are made by agreement of the Parties.

The present guarantees do not cover the following:

1) changes in the legislation of the Republic of Kazakhstan and/or the entry into force and/or changes in international treaties of the Republic of Kazakhstan, which change the procedure and conditions of import, manufacturing, and sale of excisable goods;

2) changes and additions that are made to the laws of the Republic of Kazakhstan in order to ensure national security, public order, public health and morality.

13. Applicable law

35. Legislation of the Republic of Kazakhstan applies to this investment contract and other agreements, signed based on the investment contract.

14. Term and entry into force of the investment contract

36. The term of the investment contract is determined by the period of investment preferences. The work schedule for the work program must end no later than nine months before the expiration of the investment contract.

37. The present investment contract comes into force from the moment of its registration with the authorized body.

38. The investment contract terminates upon _____, except for the cases, specified in section 16 of the investment contract.

15. Amendments and additions to the investment contract

39. The parties have the right to introduce amendments and additions to the investment contract by mutual consent in accordance with the legislation of the Republic of Kazakhstan.

16. Termination of the investment contract

40. The effect of investment preferences is terminated after the expiration of the investment contract or may be terminated before the expiration of such period in the order established by this paragraph.

41. This investment contract can be terminated:

1) by agreement of the parties;

2) unilaterally.

43. If the investment contract is terminated early upon the initiative of a legal entity of the Republic of Kazakhstan that has concluded an investment contract, the said legal entity unilaterally pays the amounts of taxes and customs duties not paid due to investment preferences granted under the investment contract.

44. In case of early termination of the investment contract by agreement of the Parties, a legal entity of the Republic of Kazakhstan that has concluded the investment contract shall pay the amounts of taxes and customs duties not paid as a result of investment preferences granted under the investment contract.

45. In case of early termination of the investment contract, a legal entity of the Republic of Kazakhstan that has concluded an investment contract shall return property in kind, provided to it as a state full-scale grant, or its original value at the date of transfer in accordance with the terms of the investment contract.

46. The return of a state full-scale grant is carried out by a legal entity of the Republic of Kazakhstan that has concluded an investment contract within thirty calendar days after the decision of the authorized investment body on the early termination of the investment contract.

17. Language of the investment contract

47. The text of the investment contract, amendments, attachments, and additional documents attached to this investment contract shall be drawn up in the Kazakh and Russian languages. All copies are equally authentic and have

equal legal force, unless otherwise provided by the terms of the investment contract.

48. The parties agree that _____ language will be used as a language of communication. From the day the investment contract enters into force, information on the implementation of the investment project will be compiled in the _____ language.

18. Additional provisions

49. Reorganization of legal entity-investor is done according to the legislation of the Republic of Kazakhstan with written consent of the authorized body.

50. Notifications and reports are presented in person or are sent to the following address by certified mail:

Authorized body: _____

(Name, official address, phone numbers)

Head of authorized body: _____

(Last name, name, patronymics)

Investor: _____

(Name, legal and actual address, phone numbers, e-mail)

Head of the investor: _____

(Last name, name, patronymics)

51. Should the addresses on the investment contract change, each of the Parties shall notify the other Party in writing within two weeks.

52. If there is any discrepancy between the provisions of the annexes and the investment contract itself, the latter is of fundamental importance.

53. This investment contract was signed on _____ in Nur-Sultan, Republic of Kazakhstan, by authorized representatives of the Parties.

Authorized body:

Signature _____ Stamp

Investor:

Signature _____ Stamp

ANNEXES TO CHAPTER 2

ANNEX 2

THE AUCTION SCHEDULE FORM

Auction date	Auction time (Astana time)	The deadline for acceptance of documents for inclusion in the register of auction participants	UPS Zone	RES type	Auctioned installed capacity, MW		Ceiling auction price, tenge/kWh	Required commissioning date, PPA validity period	Financial guarantee for participation in the auction calculated based on 1 kW of project installed capacity	PPA bond calculated based on 1 kW of project installed capacity
					Small – from 0.1 to 10 MW inclusive (for VPP – from 0.75 MW)	Large – over 10 MW				

Table I. Information on the Reserved Land Plots

No.	Region	District	Settlement	Area, ha	Land category

Table 2. Information on the Possibility of Connecting to the Electrical Grids of Energy Transmission Organizations with an Indication of the Maximum Permissible Capacity at the Electrical Grid's Connection Points and the Number of Possible Connections

Energy transmission organization	Region	District	Power transmission line	Substation		Limitation on the connected capacity (maximum permissible volume of installed capacity), MW	Limitation on the number of new connections
				Name, coordinates	Buses		

ANNEX 3

EXAMPLES OF DETERMINING AUCTION PRICES FOR DIFFERENT DEMAND AND SUPPLY SCENARIOS

Example 1. The demand and supply graphs do not **overlap**. The number of participants who submitted bids for sale is **less than two** (Figures 1 and 2). In this case, the transactions are impossible, and the auction is declared invalid.

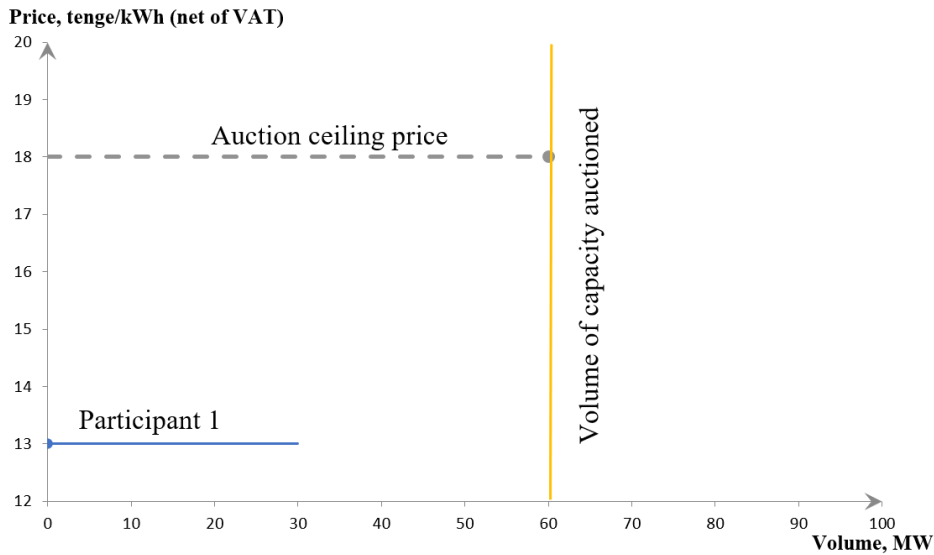


Figure 1

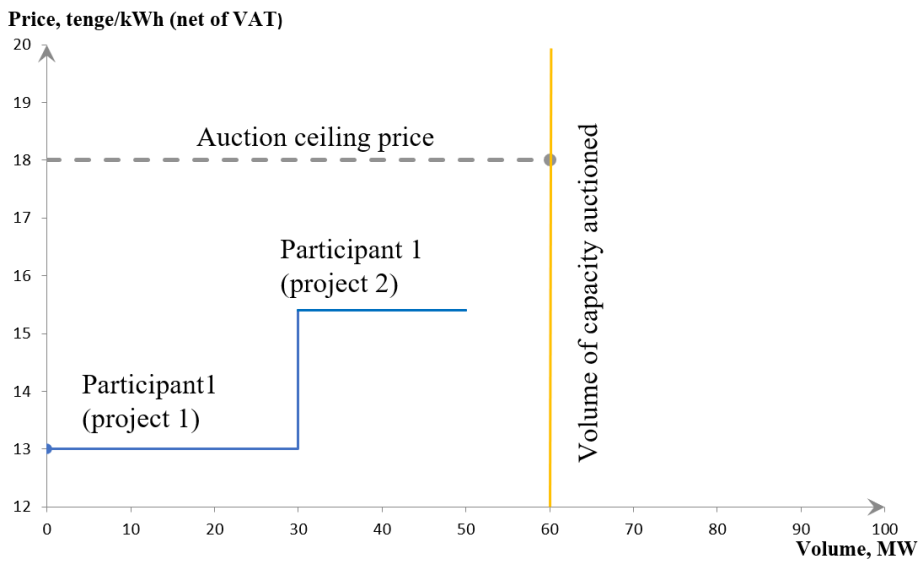


Figure 2

Example 2. The demand and supply graphs **overlap**. The number of participants who submitted bids for sale is **less than two** (Figures 3 and 4). In this case, the transactions are impossible and the auction is declared invalid.

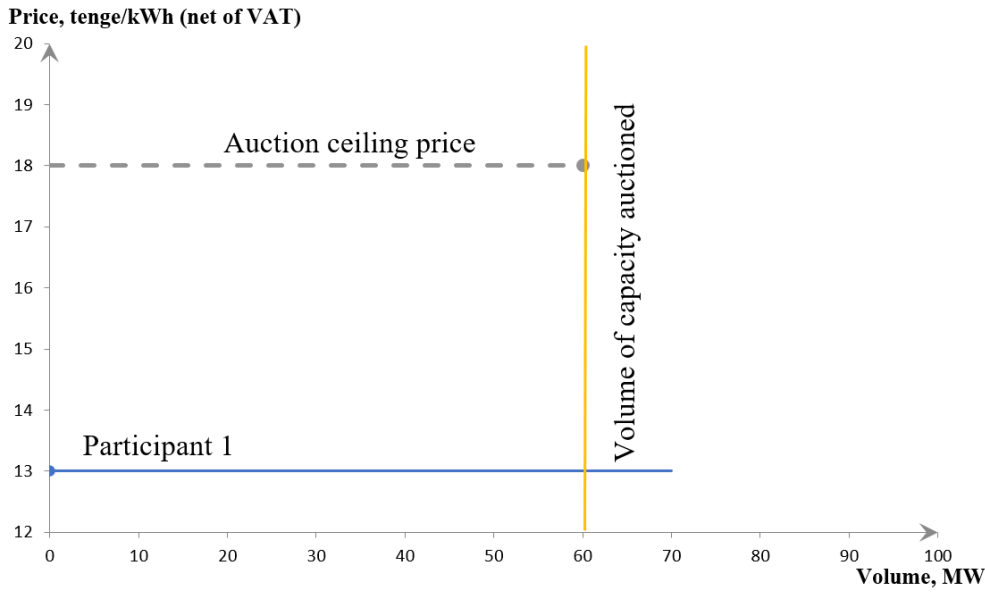


Figure 3

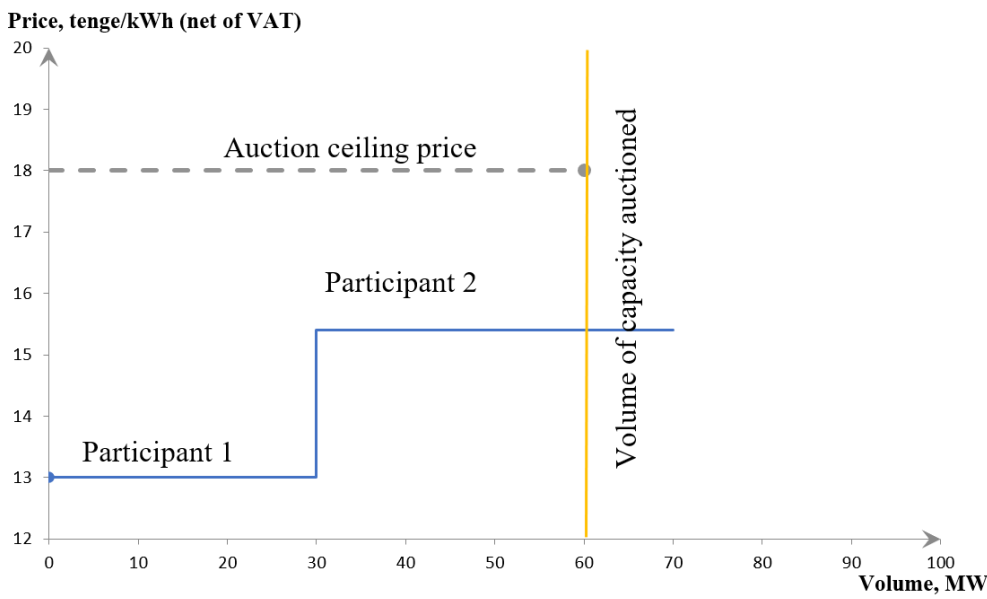


Figure 4

Example 3. The demand and supply graphs **do not overlap**. The total installed capacity volume of the auction bids for sale is **less than 130%** of the installed capacity demand volume (Figure 5). In this case, transactions are impossible and the auction is declared invalid.

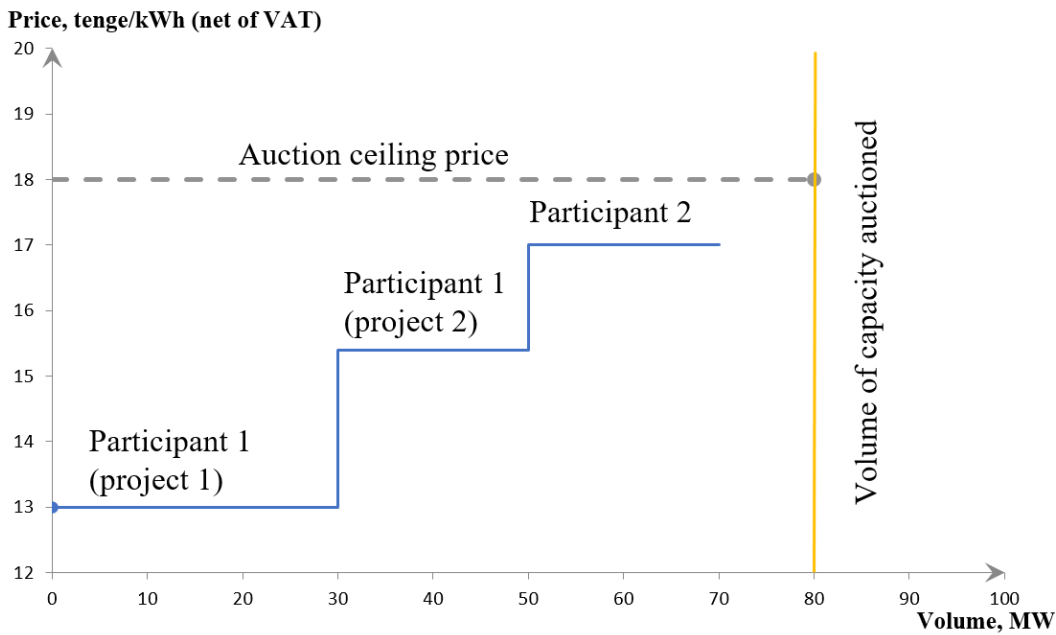


Figure 5

Example 4. The demand and supply graphs **overlap**. The total installed capacity volume of the bids for sale is **less than 130%** of the installed capacity demand volume (Figure 6). In this case, transactions are impossible and the auction is declared invalid.

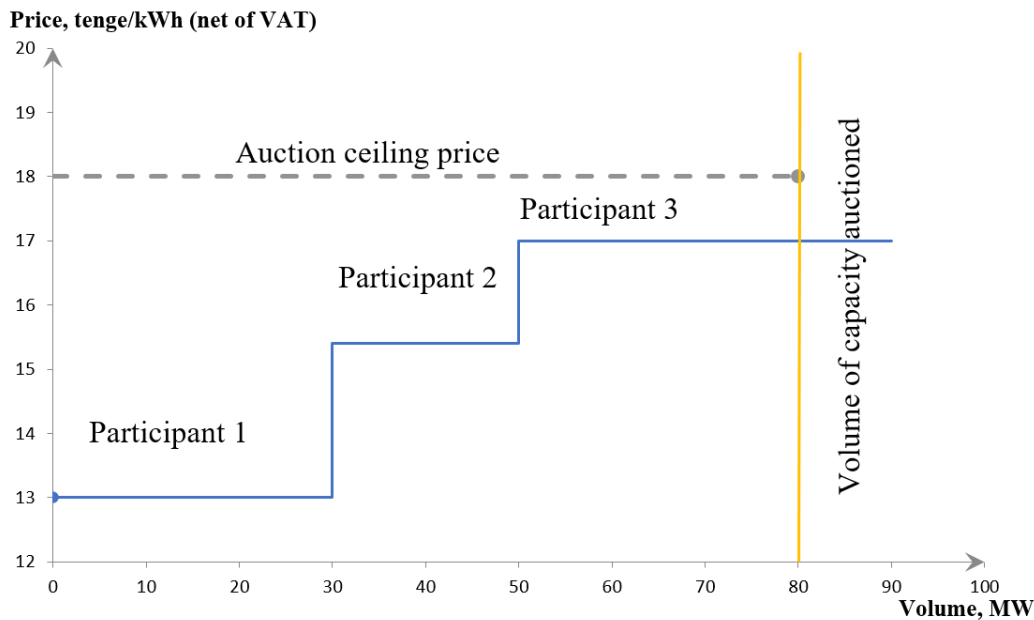


Figure 6

Example 5. The demand and supply graphs **overlap**. The number of participants who submitted auction bids for sale is **at least two**. The total installed capacity volume of the auction bids for sale is **more than 130%** of the installed capacity demand volume. The satisfied volume of the last selected auction bid is **less than 50%** of its declared volume (Figure 7).

In this case, the second bid will be **partially** satisfied. The auction prices are determined based on the prices indicated in the auction bids submitted for sale.

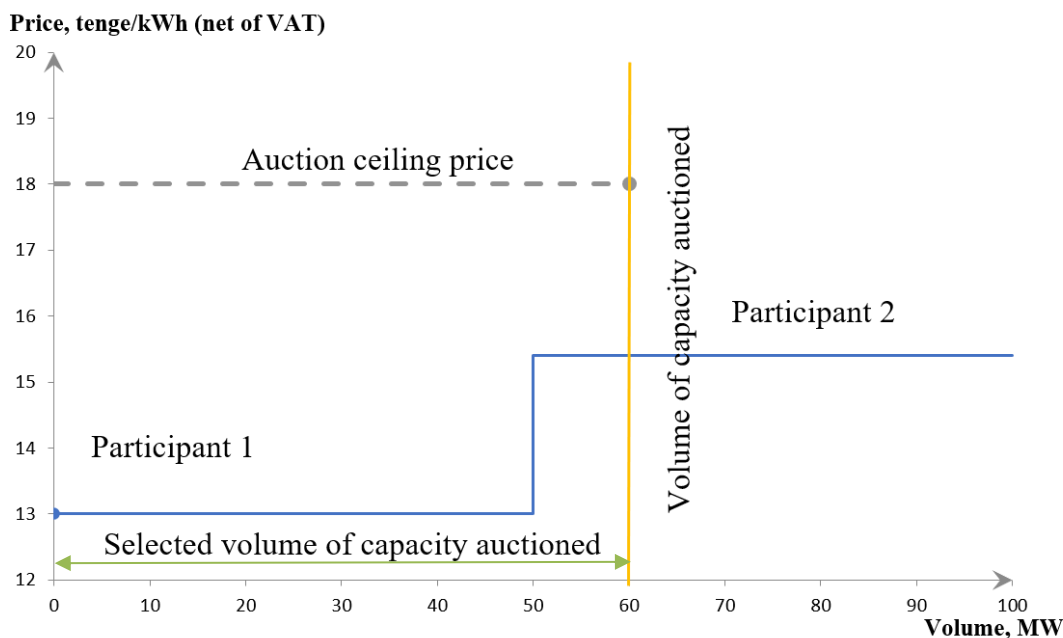


Figure 7

Example 6. The demand and supply graphs **overlap**. The number of participants who submitted bids for sale is **at least two**. The total installed capacity volume of the bids for sale is **more than 130%** of the installed capacity demand volume. The satisfied volume of the last selected bid is **50% or more** of its declared volume (Figure 8).

In this case, the installed capacity volume to be selected will be increased by the amount of the unsatisfied remaining volume of the last selected bid from the ranked schedule. The auction prices are determined based on the prices indicated in the bids submitted for sale.

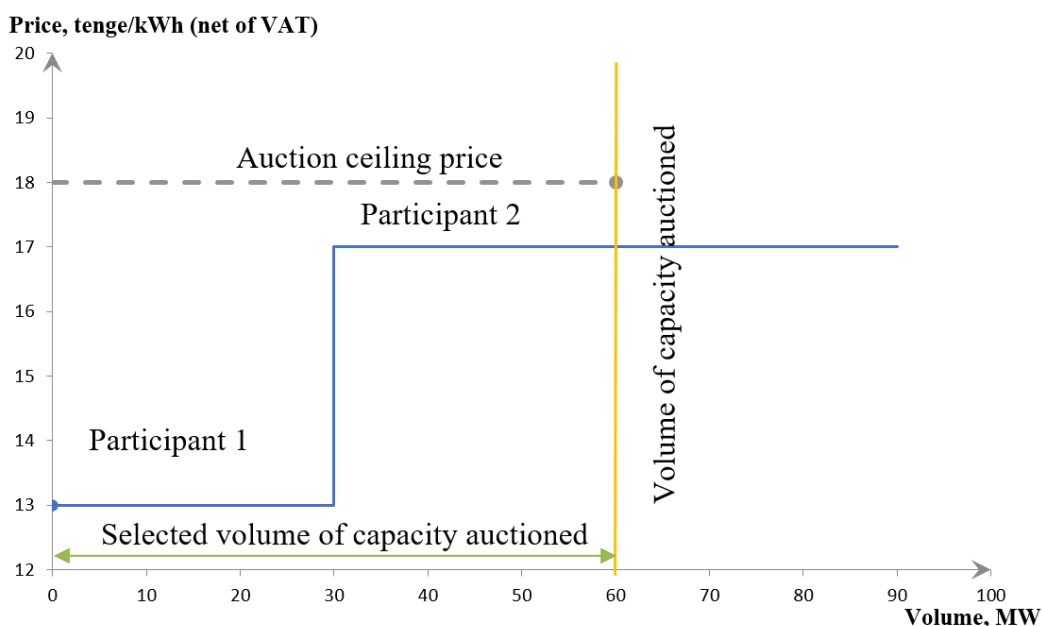


Figure 8

Example 7. The demand and supply graphs **overlap**. The number of participants who submitted bids for sale is **at least two**. The total installed capacity volume of the bids for sale is **more than 130%** of the installed capacity demand volume.

In the preliminary list of winners there are several preliminary satisfied bids which indicate the same point of connection, the technical specifications of which cannot be met because the total volume of these bids exceeds the maximum permissible capacity at this connection point. In this case, the bids are excluded from the preliminary list of winners in descending order of price, until the condition for the maximum permissible installed capacity for this connection point is met (Figure 9).

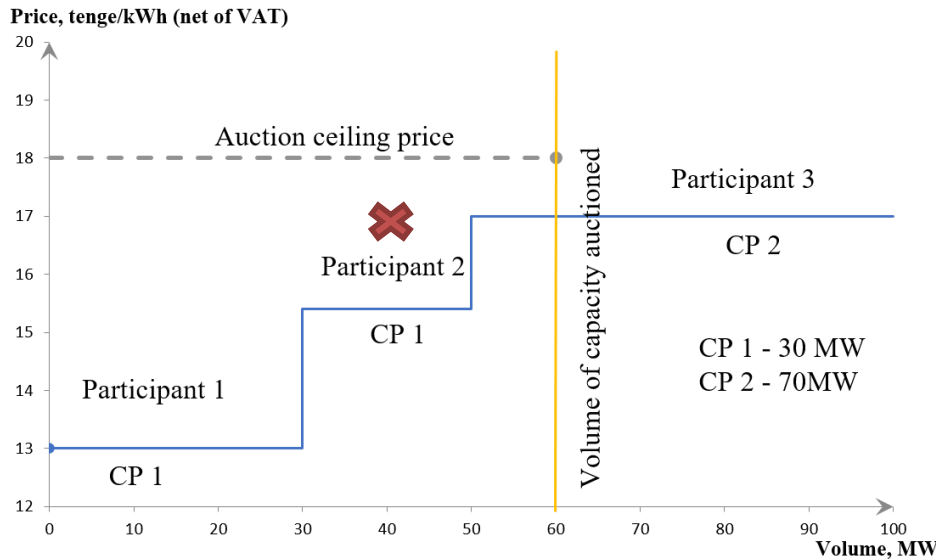


Figure 9

The satisfied volume of the last selected bid is **50% or more** of its declared volume. The installed capacity volume to be selected will be increased by the amount of the unsatisfied remaining volume of the last selected bid from the ranked schedule. Auction prices are determined based on the prices indicated in the submitted bids for sale (Figure 10).

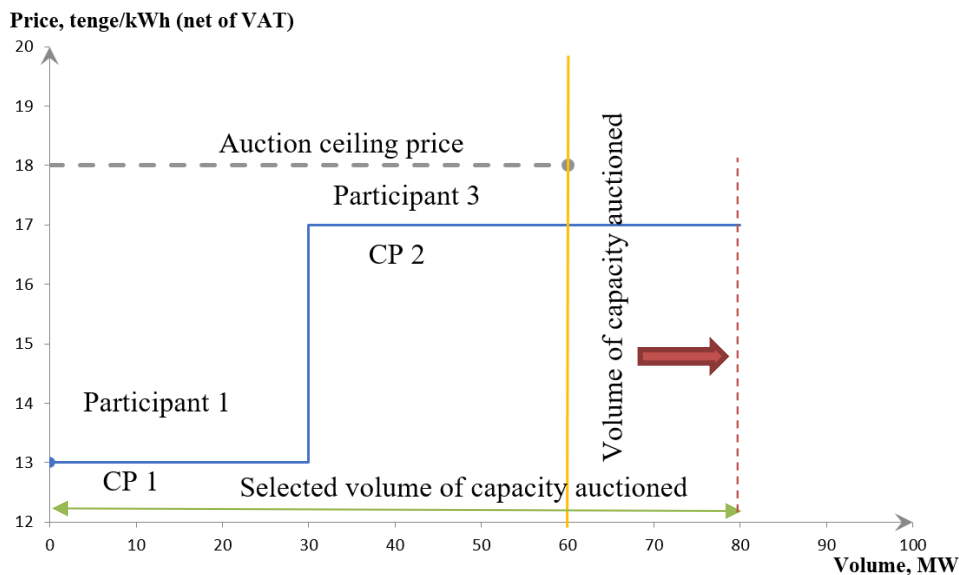


Figure 10

Example 8. The demand and supply graphs **overlap**. The number of participants who submitted bids for sale is **at least two**. The total installed capacity volume of the bids for sale is **more than 130%** of the installed capacity demand volume.

In the preliminary list of winners there are several preliminarily satisfied bids which indicate the same point of connection, the technical specifications of which cannot be met because the total volume of these bids exceeds the maximum permissible capacity at this connection point. In this case, the bids are excluded from the preliminary list of winners in descending order of price, until the condition for the maximum permissible installed capacity for this connection point is met (Figure 11).

The satisfied volume of the last selected bid is **less than 50%** of its declared volume. The installed capacity volume to be selected will be decreased by the amount of the satisfied volume of the last selected bid from the ranked schedule. Auction prices are determined based on the prices indicated in the submitted bids (Figure 12).

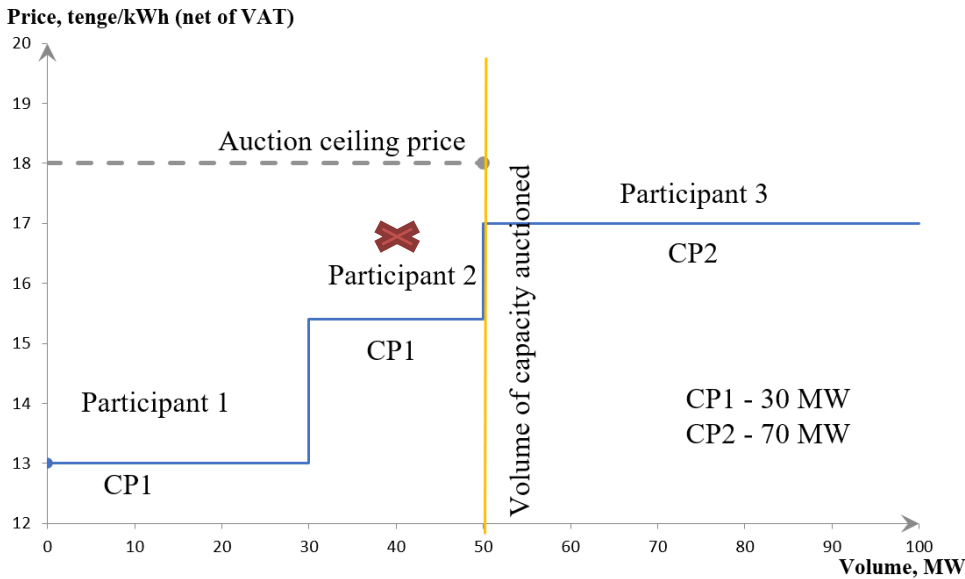


Figure 11

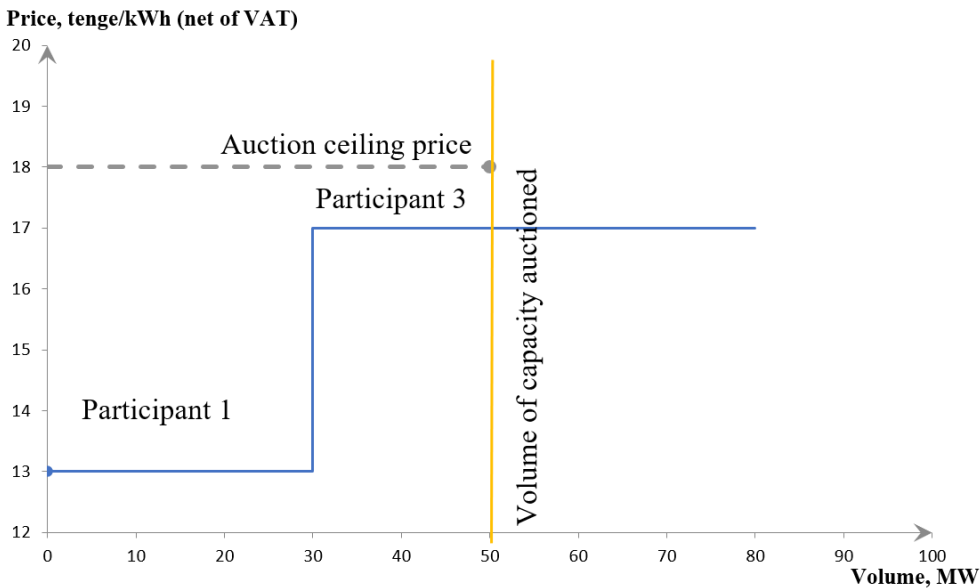


Figure 12

Example 9. The demand and supply graphs **overlap**. The number of participants who submitted bids for sale is **at least two**. The total installed capacity volume of the bids for sale is **more than 130%** of the installed capacity demand volume.

In the preliminary list of winners there are several preliminarily satisfied bids which indicate the same point of connection, the technical specifications of which cannot be met because the total volume of these bids exceeds the maximum permissible capacity at this connection point. In this case, the bids are excluded from the preliminary list of winners in descending order of price, until the condition for the maximum permissible installed capacity for this connection point is met (Figure 13).

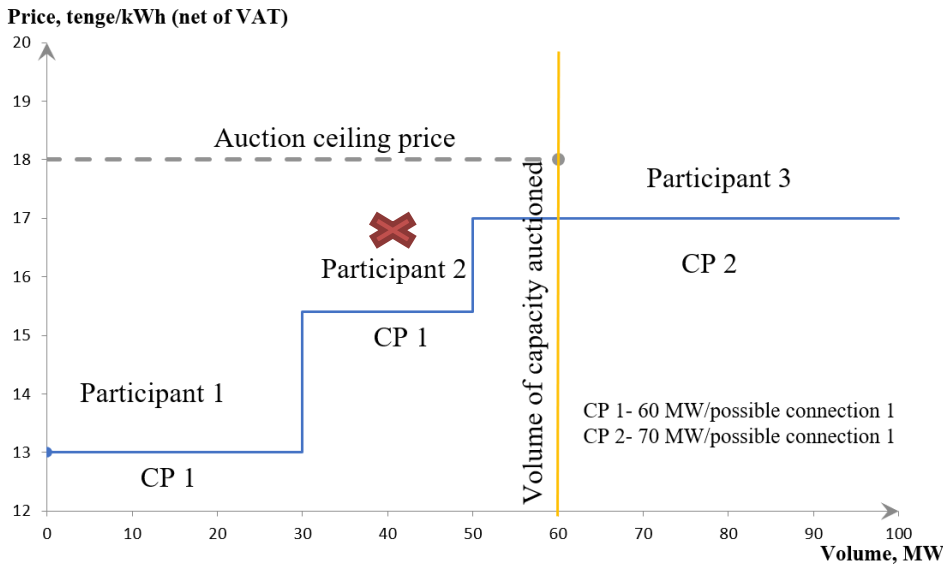


Figure 13

The satisfied volume of the last selected bid is **50% or more** of its declared volume. The installed capacity volume to be selected will be increased by the amount of the unsatisfied remaining volume of the last selected bid from the ranked schedule. Auction prices are determined based on the prices indicated in the submitted bids (Figure 14).

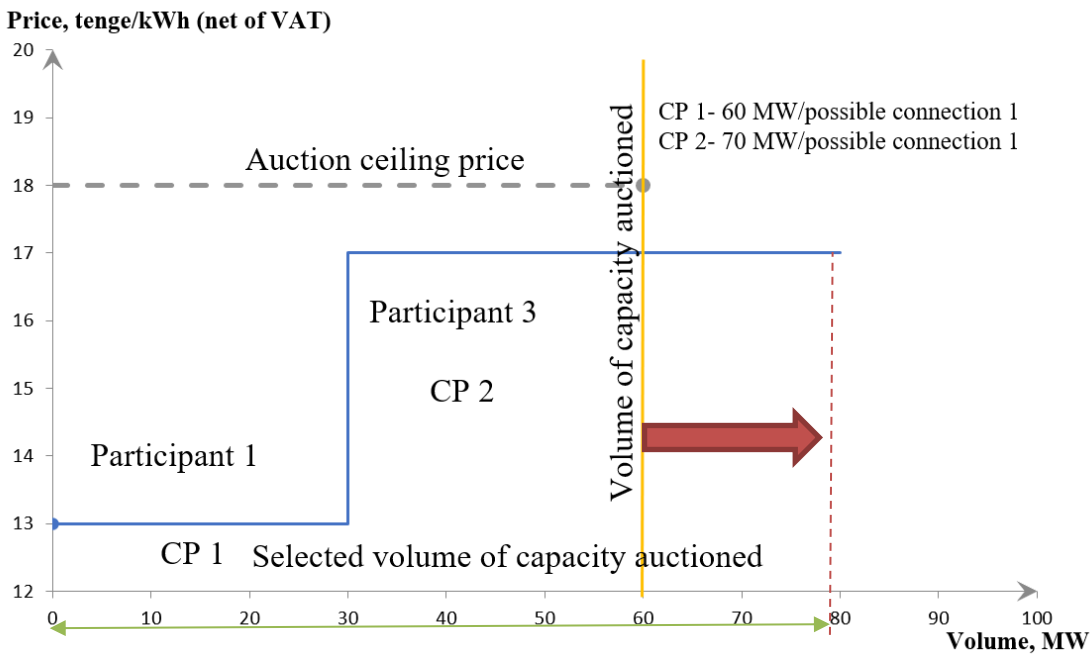


Figure 14

Example 10. The demand and supply graphs **overlap**. The number of participants who submitted bids for sale is **at least two**. The total installed capacity volume of the bids for sale is **more than 130%** of the installed capacity demand volume.

In the preliminary list of winners there are several preliminarily satisfied bids which indicate the same point of connection, the technical specifications of which cannot be met because the total volume of these bids exceeds the maximum permissible capacity at this connection point. In this case, the bids are excluded from the preliminary list of winners in descending order of price, until the condition for the maximum permissible installed capacity for this connection point is met (Figure 15).

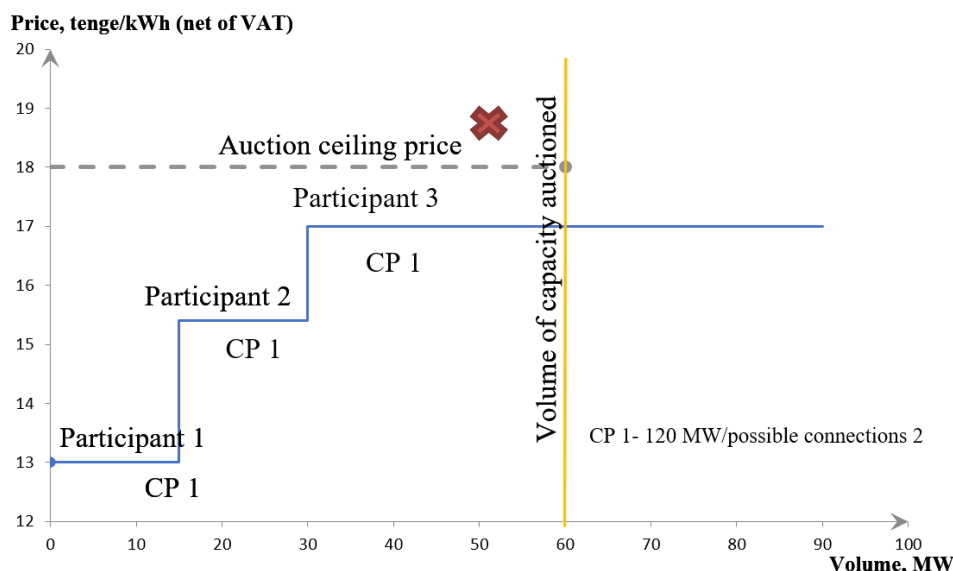


Figure 15

The installed capacity volume to be selected will be decreased by the amount of the satisfied volume of the last selected bid from the ranked schedule. Auction prices are determined based on the prices indicated in the submitted bids for sale (Figure 16).

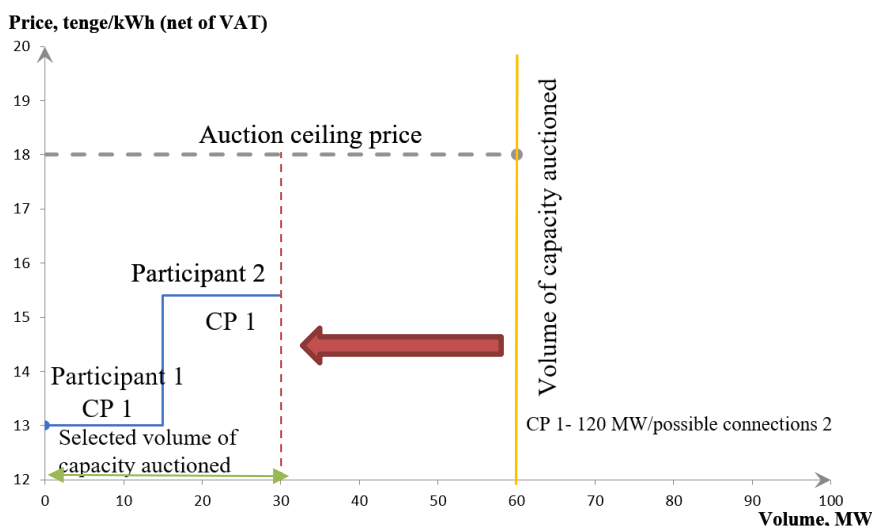


Figure 16

ANNEXES TO CHAPTER 3

ANNEX 4

THE STANDARD FORM OF THE POWER PURCHASE AGREEMENT BETWEEN THE FINANCIAL SETTLEMENT CENTER AND ENERGY PRODUCING ORGANIZATION USING RENEWABLE ENERGY SOURCES AT AUCTION PRICES

No. _____

(full name of the financial settlement center)
registered at: the Republic of Kazakhstan,

_____, BIN: _____, in the person of _____,
(legal address) (position and full name)

acting on the basis of _____, hereinafter
(basis of authority)

referred to as the "Buyer," on the one side, and _____,
(full company name)

registered at: _____,
(location)

BIN: _____, in the person of _____, acting on the basis of
(position and full name)

_____, hereinafter referred to as
(basis of authority)

the "Seller," on the other side, collectively referred to as the "Parties," and individually "Party," taking into account:

1) The Law of the Republic of Kazakhstan dated July 4, 2009, No. 165-IV, On Support for the Use of Renewable Energy Sources (hereinafter, the Law);

2) The Rules for the Centralized Purchase and Sale by the Financial Settlement Center of Electric Energy Produced by Renewable Energy Facilities, approved by the order of the Minister of Energy of the Republic of Kazakhstan dated March 2, 2015, No. 164 (registered in the Register of state registration of regulatory legal acts under No. 10662) (hereinafter – the Rules);

3) The Rules for the Determination of Feed-in Tariffs and Ceiling Auction Prices, approved by the Decree of the Government of the Republic of Kazakhstan dated March 27, 2014, No. 271;

4) The application of the Seller for conclusion of this agreement (incoming number No. _____ dated _____ 20____) (annex to the Rules);

5) The intention of the Seller to sell the electric energy produced by the renewable energy facility (hereinafter, RES) to the Financial Settlement Center at the auction price, hereby have concluded the power purchase agreement (hereinafter, the PPA) as follows.

I. Terms and Definitions

I. In this agreement the following basic concepts are used:

1) Auction price – the price for the purchase of electric energy produced by the renewable energy facility by the Financial Settlement Center, determined on the basis of auction results and not exceeding the level of the corresponding ceiling auction price.

2) Delivery point – the point of connection of the renewable energy facility to the electric grid of the energy transmission organization;

3) Month of supply – a calendar month of the actual supply of the electric energy from renewable energy facilities, starting from 00:00 on the first day of the corresponding month and ending at 24:00 on the last day of the corresponding month, the results of which are the basis for the final calculations of the volume of purchase and sale of the supplied electric energy;

- 4) Supplied electric energy – all electric energy produced by the renewable energy facility, corresponding to the norms and the requirements of the legislation of the Republic of Kazakhstan, delivered to the delivery point;
- 5) Working day – the day that is a working day for the Financial Settlement Center;
- 6) System operator is a national company that implements centralized operational and dispatch control, ensures parallel operation with the power systems of other states, maintains the balance in the power system, provides system services and procures auxiliary services from the wholesale electric energy market players, and transmits electric energy through the national electric grid, maintains it and ensures its operational readiness;
- 7) The National Dispatch Center of the System Operator (hereinafter, NDC SO) is a subdivision of the System operator responsible for the operational management of the UPS of Kazakhstan and the reliability of its operation, including balancing and ensuring the quality of electricity;
- 8) Date of commencement of commercial operation of the renewable energy facility – the date of the beginning of the comprehensive testing of electric installations of the renewable energy facility of the Seller during which electric energy is delivered to the electric networks of energy transmitting organization;
- 9) Commercial metering device – a technical device intended for commercial metering of electric capacity, electric or thermal energy, authorized for use in the order established by the legislation of the Republic of Kazakhstan;
- 10) Financial organization - a legal entity engaged in entrepreneurial activities for providing financial services, as well as international financial organizations.
- 11) PPA – power purchase agreement, signed between the Seller and the Financial Settlement Center;
- 12) Automated Commercial Energy Metering System (hereinafter referred to as ACEMS) – a set of measuring instruments and a hardware and software complex for measuring, collecting, processing, storing and transmitting electric energy metering data

Other terms used in the PPA are applied in accordance with the legislation of the Republic of Kazakhstan on support for the use of RES and the electric power industry.

2. The Scope of the PPA

2. In accordance with the PPA, the Seller sells, and the Financial Settlement Center buys the entire amount of electric energy produced at the Seller's renewable energy facility and supplied to the delivery point. The seller will generate electricity at the following renewable energy facility (hereinafter – the power plant):

- 1) name: _____;
- 2) type of the renewable energy facility (depending on the type of renewable energy source used): _____ (for solar power plants, the type of the photovoltaic module and the silicon manufacturing country are also indicated);
- 3) the land plot(s) where the renewable energy facility is located– cadastral number: _____, total area of the land plot: _____ hectares;
- 4) total installed capacity of the generating equipment of the renewable energy facility, defined as the sum of nominal (specified in the nameplate data) capacities of the main generating equipment (for solar power plants - photovoltaic DC modules, for wind power plants, hydro power plants and biopower plants - AC electrical generators) based on nameplate data of the main generating equipment _____ (MW);
- 5) the projected capacity factor of the renewable energy facility: _____;
- 6) the point of connection to the electric grid: _____.

3. The price of electric energy under the PPA is the auction price, which is _____ (_____) per 1 (one) kilowatt hour of electric energy without including value-added tax. The annual indexation of the auction price is carried out in accordance with the procedure established by the Rules for determining feed-in tariffs and auction ceiling prices approved by the Decree of the Government of the Republic of Kazakhstan dated _____ no. _____).

4. The change in the auction price as a result of indexation or the procedure of indexation of the auction price shall be formalized by signing an amendment to the PPA specifying the date the relevant changes enter into force, determined in accordance with the rules of determining feed-in tariffs and auction ceiling prices.

3. Metering of volume and payment for electric energy.

5. The volume of the supplied electricity is metered on the basis of the readings of commercial metering devices of the Seller installed at the delivery point.
6. After the Seller ensures that the ACEMS is operational at his facility, the Financial Settlement Center has the right to use the ACEMS data to meter and determine the volume of supplied electricity by the Seller and to make commercial settlements between the Seller and the Financial Settlement Center.
7. The financial settlement of electrical energy imbalances from renewable energy facilities, including the power plant, is carried out by the Financial Settlement Center in accordance with the Rules for the functioning of the balancing electricity market, approved by the Order of the Minister of Energy of the Republic of Kazakhstan No. 112 as of February 20, 2015 (registered in the Register of state registration of regulatory legal acts No. 10532).
8. In the case of disputes, the final document for mutual settlements between the Parties is the actual balance of production/consumption of electricity in the wholesale electricity market of the Republic of Kazakhstan provided by the NDC SO.
9. The electric energy produced by the renewable energy facility and delivered to the grid of the power transmission organization during the period of absence or malfunction of the commercial metering devices at the delivery point is not paid for by the Financial Settlement Center and is not considered in the mutual settlements of the Parties. At the same time, the fact and the period of absence or malfunction of the Seller's commercial metering devices must be confirmed by the relevant statement of the energy transmission organization to the grids to which the renewable energy facility is connected.
10. The payment for the electricity is carried out by the Financial Settlement Center within 15 working days after the expiration of the payment deadline established for the conditional consumers on the basis of the invoice and the volumes reconciliation act provided by the Seller.

4. The rights and obligations of the Parties

11. The Seller is Obligated to:

- 1) monthly, provide the Financial Settlement Center with information on the actual daily output of electricity delivered to the grid not later than the fifth day of the month following the delivery month;
- 2) monthly, not later than the fifth day of the month following the month of delivery, provide the Financial Settlement Center with the volume reconciliation act and the invoice for the actual volume of electric energy delivered to the electric grids;
- 3) annually, from January 1 to January 31, perform a reconciliation of mutual settlements for the past fiscal year;
- 4) monthly, provide the financial settlement center with the information on the projected volumes of generation and delivery to the electricity grids ten calendar days prior to the delivery month;
- 5) annually, by the 1st of November, send information on projected volumes of generation delivered to the electricity grids for the coming year, broken down by month;
- 6) in the event of termination of the Agreement on his own initiative, notify the Financial Settlement Center in writing a month in advance of the expected date of termination;
- 7) promptly notify the Buyer of changes in his name, legal address, actual location and other details required to fulfill the terms of the Agreement;
- 8) ensure that the ACEMS at his renewable energy facility is operational before the commercial operation of the renewable energy facility begins. The ACEMS should have the option to remotely transmit data to the regional dispatch centers of the system operator.
- 9) provide the financial settlement center with a copy of the certificate of acceptance of the scheme of commercial metering of electric energy, including the layout of the commercial and technical metering devices of the renewable energy facility, signed between the energy transmission organization and the Seller for the renewable energy facility in respect of which the Agreement is concluded within 10 (ten) working days from the date of signing of the certificate of acceptance of the scheme of commercial metering of electric energy and before the beginning of the comprehensive testing of the renewable energy facility;
- 10) in the case of a stage-by-stage commissioning of the renewable energy facility, provide a copy of the interim act of comprehensive testing of energy installations of the renewable energy facility within 5 (five) working days from the date of signing thereof, but not later than the end of the delivery month during which the comprehensive testing was

conducted;

11) provide a copy of the comprehensive testing program agreed by the system operator and a copy of the ACEMS commissioning act 10 (ten) calendar days before the beginning of the comprehensive testing;

12) ensure compliance with the daily schedules of electric energy production in accordance with the legislation of the Republic of Kazakhstan;

13) make timely changes to the daily electricity production-consumption schedule approved by the system operator in accordance with paragraph 46 of the Rules for the provision of services by the system operator, organization and functioning of the market for system and auxiliary services, approved by the Order of the Minister of Energy of the Republic of Kazakhstan No. 691 as of December 3, 2015 (registered in the Register of state registration of regulatory legal acts No. 12562);

14) if the installed capacity of the renewable energy facility is not less than one megawatt, comply with the operation modes of the generating installations of the renewable energy facility set by the system operator in accordance with the legislation of the Republic of Kazakhstan;

15) provide a copy of the act of taking readings of electricity commercial metering devices signed between the renewable energy facility and the power transmission organization to the electrical grids of which the renewable energy facility was connected - no later than on the seventh day of the month following the month of delivery;

16) provide the Financial Settlement Center with a copy of the notice on the beginning of the construction and installation of the renewable energy facility that is the subject of the PPA to the state body responsible for national architectural and construction control: within 12 (twelve) months from the date of signing of the PPA for solar, within 18 (eighteen) months from the date of signing of the PPA for wind and biogas, and within 24 (twenty four) months from the date of signing of the PPA for hydro;

17) provide the Financial Settlement Center with a copy of the operational acceptance certificate of the renewable energy facility that is the subject of the PPA, approved in accordance with the architectural, urban planning and construction regulations of the Republic of Kazakhstan – within 24 (twenty four) months from the date of signing of the PPA for solar power plants, within 36 (thirty six) months from the date of signing of the PPA for wind and biogas power plants, within 48 (forty eight) months from the date of signing of the PPA for hydro power plants.

At the same time, the indicated terms are prolonged for 1 calendar year if before the expiration of the term stipulated in the first part of this subparagraph, the authorized organization (person) for architectural and construction control and technical supervision according to the legislation of the Republic of Kazakhstan on architecture, urban planning and construction, will provide a confirmation that at least 70% of the total scope of renewable energy facility construction and installation has been completed;

18) provide the Financial Settlement Center with a copy of the act of delineation of balance sheet attribution and operational responsibilities of the parties signed between the energy transmission organization and the Seller for the renewable energy facility for which the PPA is concluded – within 10 (ten) working days from the date of signing the act of delineation of balance sheet attribution and operational responsibilities of the parties and before the beginning of the comprehensive testing of the renewable energy facility;

19) provide the Financial Settlement Center with a copy of the certificate of acceptance of the scheme of commercial metering of electric energy, including the layout of the commercial and technical metering devices of the renewable energy facility, signed between the energy transmission organization and the Seller for the renewable energy facility for which the PPA is concluded – within 10 (ten) working days from the date of signing of the certificate of acceptance of the scheme of commercial metering of electric energy and before the beginning of the comprehensive testing of the renewable energy facility;

20) at the request of the Financial Settlement Center, provide information on the progress of the construction of the renewable energy facility;

21) provide the Financial Settlement Center with the PPA performance bond in the amount of _____ within 30 (thirty) calendar days from the date of signing this PPA in accordance with the requirements set forth in paragraph 95-101 of these Rules;

22) annually, no later than October 1, provide information on the existing credit obligations in foreign currency received for the purpose of implementing the renewable energy facility construction project;

23) promptly inform the Financial Settlement Center about a merger, bankruptcy or liquidation of the Seller;

24) to build a renewable energy facility using new generating units (that have never been in operation before).

25) at the request of the Financial Settlement Center, provide information on the main characteristics of the primary resource of renewable energy used at the renewable energy facility for electricity production.

12. The Financial Settlement Center is Obligated to:

1) sign the act of reconciliation of volumes within 15 (fifteen) calendar days from the date of receipt of the act of reconciliation of volumes from the Seller, or, if he does not agree with the Seller's data on the volume of delivered electric energy, send a written substantiated refusal to the Seller within the same period with mandatory attachment of documents confirming the validity of such refusal;

2) pay the Seller for the entire volume of the delivered electricity in the month of delivery, specified in the relevant act of reconciliation of volumes within 15 (fifteen) working days after the expiration of the payment deadline established for the conditional consumers;

3) annually, from January 1 to January 31, perform reconciliation of mutual settlements for the past fiscal year;

4) promptly notify the Seller of changes in his name, legal address, actual location and other details required to fulfill the terms of the Agreement;

5) in case the renewable energy facility was commissioned within the time limits specified in part 1 of subparagraph 17) of paragraph 11 of the Agreement, return the PPA performance bond or its part within ten (10) working days from the date of submission of the written request.

6) promptly inform the Seller about a merger, bankruptcy or liquidation of the Financial Settlement Center.

13. The Seller has the Right to:

1) demand the fulfillment of the terms of the Agreement by the Financial Settlement Center;

2) carry out ongoing repair or overhaul of the renewable energy facility, including the replacement of the main generating equipment, provided that the total installed capacity of the generating equipment of the renewable energy facility specified in the Agreement will not be increased;

3) assign his existing and future rights and claims for the Financial Settlement Center arising from the Agreement, with notification of the Financial Settlement Center before the conclusion of the respective assignment of claim agreement. At the same time, the assignment of rights and claims provided for by this subparagraph shall be carried out after the authorized body makes the relevant changes in the list of energy producing organizations that use renewable energy with the provision by the Party that accepts the rights and claims under this Agreement of a financial guarantee in accordance with sub-paragraph 21) of paragraph 11 of the Agreement, as well as with the conclusion of the relevant agreement between the Financial Settlement Center, the Seller and the Party accepting the rights and claims hereunder;

4) fully assign his rights and obligations under the Agreement to a third party in the event of the alienation of the renewable energy facility to the same party. In this case, the rights and obligations under the Agreement pass on to the third party simultaneously with the renewable energy facility property rights.

14. The Financial Settlement Center has the Right to:

1) demand the fulfillment of the terms of the Agreement by the Seller;

2) withhold the sum of overpayment from the sums due to the Seller under future payments if, following the results of the settlement of the disagreements between the Parties regarding the volume of the delivered electricity in the month of delivery, it will be discovered that the Financial Settlement Center paid an extra sum to the Seller;

3) demand the fulfillment of other Sellers' obligations in accordance with the Agreement and the legislation of the Republic of Kazakhstan on renewable energy sources in the electric power industry.

5. Liabilities of the Parties

15. If the Seller violates the deadline for submission of the copy of the notice on the beginning of the construction and installation of the renewable energy facility according to subparagraph 16) of paragraph 11 of the PPA, for more than 6 months, the Financial Settlement Center retains 30% of the PPA performance bond according to the procedure established in paragraph 98 of the Rules, and notifies the Seller in writing.

16. If the Seller violates the deadline for submission of the copy of the operational acceptance certificate of the renewable energy facility according to part 1 of subparagraph 17) of paragraph 11 of this PPA, the Financial Settlement Center retains 100% of the PPA performance bond according to the procedure established in paragraph 98 of the Rules and notifies the Seller in writing. At the same time if part of the PPA performance bond is retained, according to paragraph 15 of this PPA, 70% of the PPA performance bond is retained according to the procedure established in

paragraph 98 of the Rules.

17. For the delay in payments provided for by this PPA, the Financial Settlement Center at the request of the Seller shall pay him a penalty in the amount of 0.1% (zero point one percent) of the overdue amount for each calendar day of the delay, but not more than 10% (ten percent) of the overdue amount.

18. The Parties are liable for violation of obligations under this PPA, in accordance with the legislation of the Republic of Kazakhstan and the terms of the PPA.

19. The terms of the PPA may be amended only by mutual agreement of the Parties and formalized in writing.

19-1. The Financial Settlement Center is not responsible for the deviation of the actual value of capacity factor from the projected value, as well as for the actions of third parties including but not limited to those associated with dispatching, transmission and distribution of electrical energy.

6. Force Majeure Circumstances

20. The Parties shall not be liable for failure to perform and/or improper performance of the terms of the PPA if it was the result of force majeure circumstances.

21. A force majeure circumstance is an event hindering the implementation of the Agreement, which is beyond the control of the Parties, is not related to their miscalculation or negligence, and is of an unpredictable nature.

22. The Financial Settlement Center's lack of a sufficient amount of money for any reason is not a force majeure circumstance and does not relieve the Financial Settlement Center from the liability for late payments.

23. The Party affected by the force majeure circumstances is obliged to notify the other Party about the abovementioned circumstances, their type, reasons and possible duration within ten (10) calendar days from the onset of the force majeure circumstances, as well as confirming documents.

6-1. Actions of The Parties in Cases When the Seller Attracts Loans from Financial Organizations for the Construction of The Renewable Energy Facility

23.1. If the Seller attracts financing for the construction of the renewable energy facility from financial organizations and secures it by cash receipts under this Agreement, the Seller shall send to the Financial Settlement Center an appropriate notification about pledging cash receipts with an indication of the period of validity of this notification.

23.2. Provision by the Seller of a notification to the Financial Settlement Center about pledging cash receipts expresses the irrevocable and unconditional consent of the Seller to the following actions by the Financial Settlement Center in respect of this Agreement:

1) the payment by the Financial Settlement Center of payments due to the Seller in favor of the financial organization upon the receipt of the relevant claim from it (within the limits of monthly payments). Every payment in favor of the financial organization is considered to be the proper discharge of financial obligations by the Financial Settlement Center before the Seller under this Agreement;

2) the replacement of the Seller upon the receipt by the Financial Settlement Center of a request from the financial organization about the need for such a replacement. The Seller is replaced at the request of the financial organization after the relevant changes are made to the list of energy producing organizations that use renewable energy sources according to subparagraph 10-3) of paragraph 6 of the Law;

3) the provision of information by the Financial Settlement Center to the financial organization on failures by the Seller to perform his obligations to the Financial Settlement Center under this Agreement which can result in termination or suspension of the Agreement.

7. Dispute Settlement

24. Disputes arising from the PPA shall be settled in accordance with the legislation of the Republic of Kazakhstan.

25. The Parties shall try to settle the disputes regarding the PPA by direct negotiations.

26. Each Party has the right to appeal to the court to settle a dispute related to the conclusion, validity, execution, amendment, suspension and termination of the PPA, as well as to settle other disputes regarding the Agreement.

27. All disputes related to the conclusion, validity, execution, amendment, suspension and termination of the PPA or otherwise related to the PPA, shall be heard by the public court having jurisdiction over the Buyer's seat, except for

cases when the claimant makes a decision to bring the dispute to the International Arbitration Center of Astana International Financial Center according to paragraph 104-1 of the Rules.

8. The Validity Period of the PPA and the Auction Price

28. The PPA enters into force on the date on which it is signed by both Parties.

29. The PPA and the auction price indicated therein shall cease to be effective fifteen (15) years after the date of the beginning of the comprehensive testing of the electrical installations of the renewable energy facility during which the generated electricity was delivered to the electric grids of the power transmission organization or starting from the day following the expiry of the period stipulated in the first part of subparagraph 17) of paragraph 11 of the PPA, whichever comes first.

9. Final Provisions

30. The PPA shall be terminated in the following cases:

1) the Seller does not meet the deadline for commissioning of the renewable energy facility, as provided in subparagraph 17) of paragraph 11 of the PPA;

2) the Seller sells the produced electric energy at contract prices under bilateral contracts with consumers in accordance with the electric power industry laws of the Republic of Kazakhstan during the validity period of the PPA.

3) the Seller violates the deadline for the provision of the PPA performance bond in accordance with paragraph 95 of the Rules.

31. All changes and additions to the PPA are valid only on condition that they are made in written form and signed by the authorized representatives of the Parties.

32. All correspondence between the Parties must be in written form by sending letters on paper.

33. The PPA is written in the Kazakh and Russian languages in two copies, each having equal legal force.

34. The PPA was concluded in the city of Nur-Sultan, signed by both Parties and registered by the Financial Settlement Center in the Register of Concluded Contracts "___" _____ 20 ___ year no. ___.

35. All the terms of PPA are stable, do not depend on changes in the legislation of the Republic of Kazakhstan, and can only be changed by agreement with the Buyer.

10. Details and signatures of the Parties.

The Seller	The Financial Settlement Center
_____ (full name)	_____ (full name)
Legal address: _____	Legal address: _____
Actual address: _____	Actual address: _____
tel./fax: _____	tel./fax: _____
BIN: _____	BIN: _____
BIC: _____	BIC: _____
IIC: _____	IIC: _____
_____ (bank name) (position)	_____ (bank name) (position)
_____ (full name) seal (if available)	_____ (full name) seal (if available)

ANNEXES TO CHAPTER 4

ANNEX 5

CONTACTS OF THE ASTANA, ALMATY, AND REGIONAL MAYOR'S OFFICES

Astana city

City name	Address, reception phone number	Website
Astana	Beybitshilik Str., 11 +7 (7172) 55-66-55	http://astana.gov.kz

Almaty city

City name	Address, reception phone number	Website
Almaty	Republic Square, 4 +7 (727) 271-66-63	https://almaty.gov.kz

Shymkent city

City name	Address, reception phone number	Website
Shymkent	Nazarbayev Avenue, 10 +7 (7252) 53-00-06 +7 (7252) 54-00-00	http://shymkent.gov.kz/en/

Akmola oblast

City name	Address, reception phone number	Website
Kokshetau	Abay Str., 83 +7 (7162) 29-72-00	http://akmo.gov.kz

Aktobe oblast

City name	Address, reception phone number	Website
Aktobe	Abylkhayir Khan Avenue, 40 Tel.: +7 (7132) 93-20-64	http://aktobe.gov.kz/en

Almaty oblast

City name	Address, reception phone number	Website
Taldykorgan	Nazarbayev Avenue, 38 Tel. +7 (72 82) 24-74-29 Tel . +7 (72 82) 24-68-37	http://zhetysu.gov.kz/en/

Atyrau oblast

City name	Address, reception phone number	Website
Atyrau	Aiteke Bi Str., 77 Tel. +7 (7122) 35-50-30	http://www.attyrau.gov.kz

East Kazakhstan oblast

City name	Address, reception phone number	Website
Ust-Kamenogorsk	M.Gorky Str., 40 +7 (7232) 71-31-00	http://www.akimvko.gov.kz/

Zhambyl oblast

City name	Address, reception phone number	Website
Taraz	Abay Str. No.125 Tel. +7 (7262) 43-25-18	http://www.zhambyl.gov.kz/

West Kazakhstan oblast

City name	Address, reception phone number	Website
Uralsk	Nazarbayev Avenue, 179 Tel . +7 (7112) 242036 , 242054 , 242051	bko.gov.kz

Karaganda oblast

City name	Address, reception phone number	Website
Karaganda	Alikhanov Str. , 13 +7 (7212)501522 (6820)	http://karaganda region.gov.kz

Kostanay oblast

City name	Address, reception phone number	Website
Kostanay	Al Faraby Avenue, 66. Tel: 8 (7142) 575-002	www.kostanay.gov.kz

Kyzylorda oblast

City name	Address, reception phone number	Website
Kyzylorda	Beybarys Sultan Str. No. 1 8 (7242) 60-55-11, 8 (7242) 401191 (7048)	https://e-kyzylorda.gov.kz

Mangystau oblast

City name	Address, reception phone number	Website
Aktau	14 microdistr., building No. 1 +7 (7292) 31 42 15 + 7 (7292) 42-72-92	http://www.mangystau.gov.kz

Pavlodar oblast

City name	Address, reception phone number	Website
Pavlodar	Satpayev Str., 49, Tel. +7 (7182) 32-34-22	www.pavlodar.gov.kz

North Kazakhstan oblast

City name	Address, reception phone number	Website
Petropavlovsk	Constitution of Kazakhstan Str., 58 Tel . +7 (7152) 46-42-70	http://www.sko.gov.kz

Turkestan oblast

City name	Address, reception phone number	Website
Turkestan	Amir Temir Str., 28 +7 (72533) 5-96-54, 5-96-55	http://ontustik.gov.kz/en

ANNEX 6

APPLICATION FOR THE PERMIT TO USE THE LAND PLOT FOR SURVEY WORKS

To the Mayor of the region (city, district)

(region, city)

(full name)
from _____
(surname, name, patronymic of the individual

(or the full name

of the legal entity)
IIN (BIN) _____

(details of the document certifying

the identity of the individual or legal

entity, contact phone number, address)

Application for the permit to use a land plot for survey works

I kindly request to be issued a permit to use the land plot for survey _____ works,

(specify the type and purpose of the survey work)
conducted on the basis of

(indicate the basis for the survey work)
located

(indicate the address (location) of the land plot)

_____ with the area of _____ for a period of _____
(indicate the type of land)
schedule of works _____

I undertake to accept the terms for the use of the land plot in connection with the conduct of survey work in accordance with Article 71 of the Land Code

(consent)

I give consent for the use of the information that constitutes secrets protected by law and is contained in information systems

Date _____ The applicant _____
(surname, name, patronymic of the individual

or a legal entity or

The authorized person's signature

ANNEX 7

APPLICATION FOR OBTAINING THE RIGHT TO THE LAND PLOT

To the Mayor _____

(of a region, capital, city of republican significance,

district, city of regional and district significance,

town, village, rural district)

from _____

(full name (if available) of the individual or full

name of the legal entity)

IIN (BIN) _____

(details of the document certifying the identity of

the individual or the legal entity, contact phone number, address)

Application for obtaining the right to the land plot

I kindly request to be granted the right to the land plot

located in _____

(address (location) of the land plot)

with the area of _____ hectare, for _____,

(intended use of the land plot)

_____, on the basis of: _____

(specify the type of law) (indicate exceptional cases of granting

the land plot outside of tenders (competitions, auctions).

I give consent for the use of the information that constitutes secrets protected by law and is contained in information systems.

The application is accompanied by the layout scheme of the requested land plot in electronic or hard copy format.

ANNEX 8

STANDARD OF STATE REGISTRATION OF RIGHTS (ENCUMBRANCES) TO IMMOVABLE PROPERTY STATE SERVICE

Acceptance of the application and issuance of the result of the public service is carried out through:

- 1) PSC at the location of the real estate object of the service recipient;
- 2) e-government web portal: egov.kz

Terms of rendering of the state service:

1) from the moment of delivery of the package of documents by the service recipient when applying to the State Corporation:

on state registration of emergence, change or termination of rights (encumbrances of rights) to real estate and other objects of state registration – within three working days from the date of receipt of the application to the service provider (day of acceptance of documents is not included in the term of rendering the state service, thus the result of rendering the state service provides);

according to the state registration of rights to real estate in the accelerated order – on the next working day from the moment of receipt of the application in the State Corporation (if the application is accepted after 18 hours or on Saturday in the State Corporation, the calculation of term for the service provider begins on the next working day);

when registering for the first time, the arising rights to real estate objects with a total area of more than 1000 square meters on the basis of the act of the state acceptance Commission (and in cases established by state standards the act of the acceptance Commission) on acceptance of the constructed object into operation and relating to the first category of complexity, is issued on the second working day.

Categories of complexity of the object of real estate is reflected in the technical passport.

For transactions certified by a notary public, service is provided by notaries through the interaction of the UNIS and sending an electronic copy of the title document to the information system of the legal cadastre (hereinafter referred to as electronic registration).

In the absence of confirmation of payment of the fee through the payment gate of the “electronic government” (hereinafter referred to as PGEG) within three working days from the date of receipt of the electronic request, in the state database “real estate register” (hereinafter referred to as SD RER) the provision of public services is automatically suspended;

From the moment of the service recipient's appeal to the notary, electronic registration is provided no later than one working day following the day of receipt of the confirmation of payment of the fee or exemption from payment of the fee for state registration in the information system of the SD RER.

The results of rendering the state service when applying:

1) to a state corporation – is a title document with a note on the state registration of rights (encumbrances) to real estate or suspension of registration or a written reasoned response on refusal to provide state services on the grounds provided for in paragraph 10 of this standard of state services, as well as the issuance of a certificate of state registration (on paper) in cases provided for by the legislative acts of the Republic of Kazakhstan;

2) on the portal for electronic registration – is a notification of registration or suspension of registration or a written reasoned response to the refusal to provide public services, in cases and on the grounds provided for in paragraph 10 of this Standard of Public Service in the form of electronic documents certified by the electronic digital signature (EDS) of the authorized official.

When providing a reasoned response to the refusal on the provision of public services, the document on payment of the registration fee may be presented by the service recipient upon the re-submission of documents for registration.

The form of providing the result of the public service is electronic and paper.

The result of the provision of public services for electronic registration by the service provider is sent to the UNIS, to the “personal account” portal of the service recipient and to the e-mail addresses of the parties to the transaction (if available).

The state service is provided for a fee to individuals and legal entities (hereinafter referred to as the service recipient):

The list of documents required for the provision of public services at the request of the service recipient (right holder)

or his representative is:

for the legal entity – the document confirming powers;

for an individual – a notarized power of attorney or other document confirming his/her power.

In cases where registration is carried out on the basis of a power of attorney, two copies of the power of attorney shall be submitted, one of which is the original or a notarized copy. The original of the power of attorney after registration is returned to the applicant (authorized representative):

1) to the State Corporation:

for individuals:

application for state registration of rights (encumbrances of rights) to the real estate of the established form in accordance with Application 2 to this Standard of Public Service.

At the state registration of emergence, change or termination of the right of the common joint property the application for registration can be submitted by all participants or one of them with representation of the consent of other participants certified in the notarial order;

the identity document of the service recipient (individual) (the original is provided for identification of the service recipient);

title document, confirming registration of the object. When it is a registration of rights (encumbrances) on land, an identification document of the land should be submitted.

In case of the assignment of rights (claims) under real estate pledge agreements, an agreement on assignment of rights (claims) (agreement on simultaneous transfer of assets and liabilities) shall be submitted;

a document confirming payment of the registration fee to the budget, or a document confirming a separate category of benefits and exempting from payment of fees;

for legal entities:

application for state registration of rights (encumbrances) to immovable property of the established form in accordance with Application 3 to this Standard of Public Service;

title document, confirming registration of the object. When it is registration of rights (encumbrances) on land, an identification document of the land should be submitted.

In case of assignment of rights (claims) under real estate pledge agreements, an agreement on assignment of rights (claims) (agreement on simultaneous transfer of assets and liabilities) shall be submitted;

a document confirming payment of the registration fee to the budget, or a document confirming a separate category of benefits and exempting from the payment of fees;

founding documents;

minutes of meetings (or extracts from them) of founders (participants, board of directors, board of shareholders) for acquisition or alienation of real estate objects, in cases provided by the laws On Joint Stock Companies and On State Property, or founding documents;

foreign legal entities shall submit a legalized extract from the trade register or other legal document certifying that the foreign legal entity is a legal entity under the legislation of a foreign state, with a notarized translation into the state and Russian languages.

If the application for registration contains information that the total book value of the acquired or sold assets exceeds the amounts established by the antimonopoly legislation of the Republic of Kazakhstan, the service recipient shall submit a preliminary written consent of the antimonopoly authority.

Documents confirming the emergence, change and termination of rights to real estate and other objects of state registration shall be submitted in two copies, one of which is the original or a notarized copy.

with electronic registration:

the query in the form of an electronic document certified by electronic digital signature of the notary;

the identity document of the service recipient (individual) (the original is provided for identification of the service recipient);

title documents confirming the object of registration, certified by a notary – in electronic form by a notary attached to the electronic request;

payment to the budget of the amount of the registration fee, or a document confirming a separate category of benefits and exempting from the payment of fees for the following categories: separate living pensioners and small businesses engaged in training and education for three years from the date of state registration in electronic form attached to the electronic request;

e-mail addresses on the Internet of the parties to the transaction (if any).;

Information contained in the state information systems, on the identity document, on the state registration (re-registration) of a legal entity.

Upon receipt of the state service, the service recipient shall provide written consent to the use of information constituting a secret protected by law contained in information systems, unless otherwise provided by the laws On National Registers of Identification Numbers, On Personal Data and Their Protection, and the Commercial Code of the Republic of Kazakhstan.

When accepting documents, the employee of the state corporation checks the documents with the information provided from the state information system and returns the service recipient.

ANNEX 9

APPLICATION FOR THE PROVISION OF A LAND PLOT FOR THE CONSTRUCTION OF THE FACILITY WITHIN LIMITS OF A SETTLEMENT

To the Mayor _____

(of a region, district, city, town,

aul (rural) district, *aul*, village)

(Full Name)

from _____

(The full name of the individual or full name

of the legal entity)

IIN / BIN _____

(details of the document certifying

the identity of the individual or the legal

entity, contact phone number, address)

Application for the provision of a land plot for the construction of the facility within the limits of a settlement.

I kindly request being provided the right of temporary non-gratuitous use of the land for a period of _____
years, located _____

(location of the land plot)

with the area of _____ hectares for construction _____

(the name of the facility to be constructed, number of floors)

(approximate building footprint area)

The application is accompanied by layout scheme of the requested land plot in electronic or hard copy format.

The applicant _____

(Full name of the individual or full name of the legal entity, signature)

Date _____

Appendix

To the Application for the Provision of a Land Plot for the Construction of a Facility within the Limits of a Settlement

Form

The layout scheme of the requested land plot

Note: The configuration and the expected dimensions of the requested land plot must be specified.

The applicant _____

(Full name of the individual or the full name of the legal entity, signature)

Date _____

ANNEX 10

APPLICATION FOR SPECIAL WATER USE PERMIT

to _____

(full name of government body)

from _____

(full name of a individual or legal entity)

Application
for special water use permit

I am writing to request (check the corresponding box):

for dumping of industrial, domestic, drainage and other wastewater into surface water bodies, water management facilities or terrain;

to use economic-drinking and industrial-technical groundwater with withdrawal limits from fifty to two thousand cubic meters per day;

to extract and/or use surface water with the use of facilities or technical devices specified in Paragraph 1 of Article 66 of the Water Code of the Republic of Kazakhstan dated July 9, 2003 (hereinafter, the Code).

Item 1 is stated in the edict of the order by the Deputy Prime Minister of the Republic of Kazakhstan – Minister of Agriculture of the Republic of Kazakhstan dated 11.04.17, No. 161 (see prev. ed.)

1. Information about a individual or legal entity:

1) applicant's address _____;

(index, city, district, *oblast*, street, building no., phone)

2) applicant's details _____;

(for individuals: IIN, for legal entities: BIN)

3) surname, name, patronymic (if any), contact number of a person responsible for water use

_____;

4) cadastral number of a real estate object or inventory number of a technical device with the help of which special water use is carried out

_____;
2) address _____;

(index, city, district, *oblast*, street, building no., phone, fax)

3) surname, name, patronymic (if applicable), contact number of a person responsible for water use _____;

4) cadastral number of a real estate object or inventory number of a technical device with the help of which special water use is carried out

_____;
2. Layout scheme of surface water extraction and/or use, discharge of sewage, groundwater source with coordinates indicated is presented in the form, according to Annex 1 to this application.

3. Water use purpose _____.

4. Information on the water body used for special water use shall be filled in on the form, in accordance with Annex 2 to this application.

5. Estimated volume of abstraction and/or use of surface water, discharged sewage, abstracted groundwater is presented in accordance with Annex 3 to this application (it is indicated separately for each type of water use, except for individuals and legal entities that use water bodies for hydropower purposes and flow regulation).

Paragraph 6 is stated in the edict of the order of the Deputy Prime Minister of the Republic of Kazakhstan – Minister of Agriculture of the Republic of Kazakhstan dated 11.04.17, No. 161 (see prev. ed.)

6. Specific norms of water consumption and water disposal per unit of output and data on their coordination with the Committee on Water Resources of the Ministry of Agriculture of the Republic of Kazakhstan, with the exception of individuals or legal entities that seize water resources for water treatment and/or delivery to water users for drinking purposes, surface runoff with the help of retaining hydraulic structures, and water use from water bodies without extracting water from them

(norms, date and approval time frame)

7. Expected start and end dates for water use:

Water use start date « ___ » _____ 20__

Water use end date « ___ » _____ 20__

8. Characteristics of the production activity of the water user (output, number of employees, serviced population, capacity, area of irrigated land)

9. The list of secondary water users according to the form, in compliance with Appendix 4 to this application (applications for supply or reception of wastewater are attached to the documents for obtaining a permit for special water use).

10. Information on previously issued permits for special water use (number, date of issue, issued by, validity period, if any, of the applicant)

11. Description of equipment for accounting for water use, conducting routine observations and laboratory tests (type, label, technical characteristics, quantity, laboratory areas of accreditation, etc.)

12. Permit data for environmental emissions – when discharging treated industrial, domestic, drainage and other wastewater, with the exception of heat exchange (normative-pure) water

(number, permit validity duration)

13. Data on the sanitary-epidemiological conclusion on compliance with sanitary-epidemiological requirements – when extracting surface and/or ground water for domestic and drinking water supply

(number, date of issue)

14. Applicant intends to ensure the rational use of water resources and reduce water losses (in accordance with Article 72 of the Code)

Applicant

(signature) surname, name, patronymic (if any)

Stamp here (if applicable)

« ___ » _____ 20__

Application submitted for review « ___ » _____ 20__

(signature, surname, name, patronymic (if any) of a person accepting the application)

LAYOUT SCHEME

of abstraction and/or use of surface water, sewage discharge, and groundwater source places

Scale _____ (specify)

Location name (or water body) of water abstraction (wastewater disposal)	Area of the land plot indicated on the layout scheme by corner points	Point no.	Geographical coordinates					
			longitude			latitude		
			degree	minute	second	degree	minute	second
	_____	1						
	_____ hectare	2						
	_____ square kilometer	...						
	_____	1						
	_____ hectare	2						
	_____ square kilometer	...						
	_____	1						
	_____ hectare	2						
	_____ square kilometer	...						

Area of the land plot indicated by corner points in the layout scheme is ____ hectares (square kilometers).

Information on water body used for special water use

No.	Name of the water body, main hydrological and hydrogeological characteristics (when discharging industrial, domestic, drainage and other wastewater into water structures or the terrain, characteristics of facilities designed to discharge and receive these waters are indicated)	Water source* code (receiver)	Type of special water use	Type (code)** of use
1				
2				
...				

Note:

* Sea - 10, river - 20, intermittent river - 21, lake - 30, artificially impounded water body - 40, off-channel reservoir - 40, principal channel - 50, main pipeline - 55, underground reservoir - 60, mine, pit, quarry - 61, pumper-well drainage - 62, collector-drainage network - 70, collectors not connected to river network - 71, collectors reaching surface water bodies - 72, agricultural irrigation fields - 80, storage lagoons - 81, topographic features - 82, filtration fields - 83, water supply network - 90, sewer network - 91.

** DH - drinking and household, IND - industrial, AGC - agricultural water supply, CFI - continuous-flow irrigation, LI - liman irrigation, FP - flooding of pastures, HF – hayfield flood, PFE - pond fish establishment, CLM – channel level maintenance, PM - pressure maintenance, OSF - off-channel-location storage reservoir filling, WT – water transit, TWU - transferred without using, TAB - transferred to another basin, TAS - transferred to another state, CF - channel flushing, RR - regulating releases, HPE - hydraulic power engineering, O - Other.

Estimated volume of abstraction and/or use of surface water, discharged sewage, withdrawn groundwater

Type of special water use _____

No.	Months	Cubic meter/day	Cubic meter /month
1	2	3	4
1	January		
2	February		
3	March		
4	April		
5	May		
6	June		
7	July		
8	August		
9	September		
10	October		
11	November		
12	December		
Total per year, cubic meters/year			

List of secondary water users

No.	Name of water users	Code of state registration of water use (GUIV) of a water user (if any)	Estimated volume (cubic meter/year)	Purpose of water use	Number and date of the agreement
1	2	3	4	5	6
1					
2					
3					
4					
...					
Total per year, cubic meters/year					

ANNEXES TO CHAPTER 6

ANNEX II

STANDARD FORM CONTRACT ON RENEWABLE ENERGY FACILITIES CONNECTION

_____ «__» _____ 20__

(place of contract)

(organization's full name),

hereinafter referred to as the Power Transmission Organization in the person of _____,

(position, full name)

acting under _____, of the first part, and _____

(organization's full name)

hereinafter referred to as Power Producing Organization in the person of _____,

(position, full name)

acting under _____, of the other part, referred together herein as the Parties, have entered into this Contract (hereinafter, Contract) as follows.

1. General Definitions Mentioned in the Contract

I. The following basic definitions are used in the Contract:

- 1) connection to electrical network – physical connection of the facility using renewable energy sources of the Power Producing Organization to the electric network of the Power Transmission Organization;
- 2) point of connection to the grid – place of physical connection of the facility for using renewable energy sources of the Power Producing Organization with the electric network of the Power Transmission Organization;
- 3) act on connection to the electric network – a document signed by authorized persons of the Parties, confirming the fulfillment of technical specifications and connection to the electric network;
- 4) technical specifications – technical requirements for connection to electrical networks;
- 5) system operator – a national company that performs centralized operational dispatch management, providing parallel operation with the energy systems of other states, maintaining balance in the power system, rendering system services and acquiring ancillary services to the subjects of the wholesale electricity market, as well as transmitting electric power through the national electric grid, maintenance and maintenance in operational readiness.

Other definitions used in this Contract are applied in accordance with legislation of the Republic of Kazakhstan on supporting renewable energy sources use.

2. Subject Matter of the Contract

2. The Power Transmission Organization is obliged to provide the Power Producing Organization with access to the electric grid by providing a point of connection to the electric grid in accordance with technical specifications for connection to the electric network developed and issued in accordance with the Grid Rules approved by the order of the Minister of Energy of the Republic of Kazakhstan dated December 18, 2014, No. 210 (registered in the Register of State Registration of Regulatory Legal Acts under No. 10899) (hereinafter, the Grid Code).
3. The Power Producing Organization undertakes to fulfill in full the requirements of the technical specifications and ensure the commissioning of the facility for renewable sources use until the end of the term of the technical specifications.

3. Rights and Obligations of the Parties

4. Power Producing Organization is Obligated to:

- 1) comply with the requirements of technical specifications within the time limits established therein and in full in accordance with this Contract;
- 2) conclude the contract for the provision of services for technical dispatching of supply to the grid and consumption of electrical energy with the system operator before the beginning of comprehensive tests;
- 3) conclude an electricity sales and purchase contract with the buyer before beginning the comprehensive tests;
- 4) conclude a contract for the provision of services for the transmission of electric power with the Power Transmission Organization before beginning the comprehensive tests;
- 5) after meeting the technical specifications' requirements, conduct comprehensive tests of the renewable energy facility in accordance with the requirements of the Grid Code.

5. The Power Producing Organization has the right, before the expiration of the terms of the technical specifications, to file an application with the Power Transmission Organization for the extension of the validity period of the issued technical specifications.

6. The Power Transmission Organization is Obligated to:

- 1) reserve the point of connection to the electric grid, specified in the technical specifications, for the Power Producing Organization before the end of the technical specifications term;
- 2) within 30 (thirty) calendar days after filing of an application by the Power Producing Organization, authorize connection to the power grid and delivery of the facility's capacity for renewable energy sources use in full compliance with the terms of this Contract.

7. The Power Producing Organization is Entitled to:

- 1) a one-time renewal of the technical specifications for a period not exceeding one calendar year at request of the Power Producing Organization, to be filed before the expiration of the terms of the technical specifications;
- 2) refuse to issue a permit to connect to the power grid in the case of a failure to meet the technical specification requirements;
- 3) make appropriate changes to technical specifications in the case where changes and/or amendments to legislation of the Republic of Kazakhstan are introduced with prior written notification to the Power Producing Organization.

4. Liability of the Parties

8. For nonfulfillment and/or improper performance of obligations under this Contract, the Parties terminate the Contract in accordance with legislation of the Republic of Kazakhstan.

5. Consideration of Disputes

9. Disputes arising from this Contract shall be resolved in accordance with legislation of the Republic of Kazakhstan.

6. Contract Validity Period

10. This Contract comes into force from the moment of its signing by the Parties and is valid until the end of the term of validity of the technical specifications or before the signing of the act on connection to the electric grid, but not later than the deadline for submission of the act on commissioning of a new renewable energy facility specified in the purchase agreement settlement and financial settlement center of electric energy from the Power Producing Organization using renewable energy sources, whichever comes first.

11. In the event of the extension of the term of the technical specifications in accordance with the terms of this Contract, the Parties shall draw up a corresponding amendment to this Contract.

7. Termination of the Contract

12. This Contract may be terminated:

- 1) by agreement of the Parties;
- 2) in other cases, provided for by the legislation of the Republic of Kazakhstan.

8. Circumstances of Insuperable Force

13. The Parties shall not be liable for non-performance and/or improper performance of the terms of the Contract, if it was the result of circumstances of insuperable force.

14. Events that prevent the parties from fulfilling terms of this Contract, because of circumstances of insuperable force,

that are extraordinary and unavoidable under the given circumstances, events (natural phenomena, military actions, etc.) are recognized as a circumstance of insuperable force.

15. The Party affected by circumstances of insuperable force is obliged to notify the other Party within 10 (ten) calendar days from the date of their appearance, indicating the nature, reasons for the occurrence of circumstance of insuperable force and their expected duration with the submission of supporting documents.

9. Other Terms

16. The Parties, after completion of technical specifications and connection of the renewable energy facility to the power grid, sign the act on connection to the electric grid in accordance with the annex to this Contract.

17. If it is necessary to resolve issues of the balance equipment belonging to the Power Production Organization at the facilities owned by the Power Transmission Organization, the Parties shall make appropriate amendments and additions to this Contract.

18. Relations of the Parties arising from the Contract and not regulated by it are regulated by legislation of the Republic of Kazakhstan.

19. The Contract shall be made in two copies in the state and Russian languages, one copy for each Party.

20. All Annexes to this Contract are its integral parts.

21. Information contained in this Contract is confidential and is not subject to disclosure and/or transfer to third parties without written consent of the other Party, except for those established by legislation of the Republic of Kazakhstan.

22. All changes and additions to this Contract are valid only if they are made in writing and signed by both Parties.

Legal addresses, details and signatures of the Parties

ANNEX 12

STANDARD FORM CONTRACT

ON SERVICE RENDERING FOR TECHNICAL DISPATCHING OF RELEASE TO THE NETWORK AND CONSUMPTION OF ELECTRIC ENERGY

(place of contract)

« ____ » _____ 20__

(name of service providing entity, constituent documents)

(license * or certificate of state registration (re-registration) of a legal entity, date and issuing authority)

providing services for technical dispatching of supply to the grid and consumption of electric energy, hereinafter referred to as the Supplier, in the person of

(in the person of)

acting under _____, of the first part, and _____

(user details, constituent documents, license * or certificate of state registration (re-registration) of a legal entity, date and issuing authority)

hereinafter referred to as the Consumer, in the person of

(in the person of)

acting under _____, have entered into this Contract (hereinafter referred to as the Contract) as follows.

I. General Definitions of the Contract

I. The following basic concepts are used in the Contract: billing period is the period defined in the Contract as a period of time equal to one calendar month from 00:00 on the first day to 24:00 (the average time in Central Europe is one hour ahead of Greenwich mean time) of the last day of the month for which the calculation of the services of the Supplier for technical dispatching is performed;

national dispatching center of the system operator – is a structural subdivision of the system operator that performs the functions of centralized operational dispatch control over the modes of production, transmission and consumption of electric power and capacity in the unified power system of the Republic of Kazakhstan;

complex of commercial accounting – is the equipment necessary for commercial accounting located between a certain point of commercial accounting and the point of connection to the device for collecting information;

actual volume – is the volume of electric energy released by the Consumer in the network (across the networks) of all voltage classes, regardless of the network belonging, including in the network (via networks) of the Consumer;

Consumer – is a power-producing, energy-supplying or energy transmitting organization, as well as a legal entity that supplies (imports) electricity from outside the Republic of Kazakhstan;

Department of the authorized body – is the Committee for the Regulation of Natural Monopolies and Protection of Competition of the Ministry of National Economy of the Republic of Kazakhstan;

normative quality of electric power – is the quality of electric energy that meets the requirements and standards approved at the time of the Contract performance;

contractual volume of electric energy / electric power – is the volume of electrical energy subject to technical

dispatching;

electric networks — are a set of substations, distribution devices and power transmission lines connecting them, intended for the transmission and/or distribution of electrical energy belonging to both the Supplier and/or the Consumer, and third parties based on ownership, proprietary rights or on other grounds established by civil legislation of the Republic of Kazakhstan;

actual balance of electricity production and consumption in the wholesale electricity market of the Republic of Kazakhstan is a document compiled by the System Operator that establishes targeted distribution of the volumes of electricity produced, supplied and consumed in decentralized and centralized trade markets, balancing the electricity market for the billing period. The actual balance is the basis for making settlements between the subjects of the wholesale electricity market of the Republic of Kazakhstan;

application — is a written document signed by the authorized representative of the Consumer and sent to the Supplier in the manner and within the time limits specified in the Contract; it contains information on the amount of electric energy, time for the transmission of electricity, and distribution of capacity over the period. The application can be monthly, daily or situational;

regional dispatch center — is a regional system operator's dispatch center subordinated to the national dispatch center of the system operator and carrying out operational dispatch functions;

supplier — is a system operator that provides services for the technical dispatching of supply to the grid and the consumption of electrical energy to the Consumer.

Other concepts and terms used in this Contract are applied in accordance with legislation of the Republic of Kazakhstan on Natural Monopolies and Regulated Markets and the Law of the Republic of Kazakhstan dated July 9, 2004, On Electric Power.

2. Subject Matter of the Contract

2. The supplier provides technical dispatching of electricity supply to the grid and parallel operation of the Consumer's power plants as part of the unified power system of the Republic of Kazakhstan.

3. Technical specifications and characteristics of services provision for technical supply dispatching to the grid and consumption of electrical energy:

(this item provides for the technical specifications and characteristics)

subject of the Contract, which must comply with the requirements of normative technical documents

3. Terms for Ensuring Technical Dispatching

4. Technical dispatching services are rendered in accordance with legislation of the Republic of Kazakhstan On Electric Power and this Contract.

5. Daily schedules for electrical energy supply from energy producing organizations and/or electric energy imported by the Consumer are accepted for the mode of technical dispatching.

6. The daily schedule of production and consumption of electricity is compiled by the Consumer based on direct contracts concluded with the consumers (do consumers conclude contracts with consumers?), considering adjustments based on agreed daily applications of consumers.

4. Accounting for Electricity Supply

7. The actual volume of electric energy released by the Consumer in the network (via networks) of all voltage classes, regardless of the point of connection of electrical installations, is determined from 00:00 o'clock of the first day to 24:00 o'clock (Central European time — Greenwich mean time plus one hour) of the last day of the billing period according to the indications of commercial metering devices installed on the tires of the energy producing organizations (power stations) of the Consumer, or at the interface between the operational responsibility of the Consumer and the electric network owners, signing parties of meters indication verification not later than the fifth day of the month following the settlement.

8. Adjustment to the monthly volume of the contractual amount of electricity supply is promptly agreed by the parties no later than ten calendar days before the beginning of the month. Adjustment to the monthly volume is allowed only

within the agreed quarterly volume of technical dispatching services.

Proposals for the quarterly volume of the contractual supply value to the grid and consumption of electrical energy are promptly agreed by the parties no later than sixty calendar days before beginning of the quarter.

9. Instruments of commercial accounting must be checked and sealed. Parties must provide each other access to commercial meters, during working hours of the day for the purposes of taking readings, checking and sampling. If one of the parties is not present when taking readings, the other party can take the reading independently.

10. Parties shall, at their own expense, perform metrological verification of meters and other measuring equipment on their balance sheets within the time limits specified in the relevant metrological standards.

Parties may require additional checks to be made at the expense of the requiring party.

If during additional verification it is found that the meter readings exceed the error allowed by their accuracy class, then the cost of additional verification is paid by the owner of the devices.

11. In carrying out any type of work related to the change or violation of electricity metering, the Consumer shall notify the Supplier in writing about this prior to the commencement of work and obtain the appropriate permit. During the period of repair, electricity metering can be carried out by the Consumer, according to the temporary schemes agreed with the Supplier.

5. Rights and Obligations of the Parties

12. Supplier has the Right:

1) in agreement with the Consumer, to change the approved daily schedule of production and consumption of the electric energy of the Consumer, subject to the observance of the contractual supply values to the grid and consumption of electric power following the calculation period;

2) with a decrease (loss) in the generating capacity of the Consumer or decrease in the supply of electricity to the Consumer's address by other suppliers, to impose restrictions on its consumers on the amount of the decrease in the supply to the network according to the Consumer's list. In the absence of a list, twenty minutes after the preliminary warning, make restrictions on its consumers at its own discretion. Restrictions of consumers are not introduced if the Consumer provided replacement capacity from another generating source, and only in the case of an actual increase of reserve capacity by suppliers;

3) if the Consumer does not comply with the approved daily schedule of production and consumption of electric power, considering operational adjustments, introduce restrictions on its consumers by the amount of the decrease in the supply to the network according to the list of consumers provided by the Consumer. In the absence of a list, the Supplier, twenty minutes after the preliminary warning by the Consumer, may perform restrictions on its consumers at their own discretion;

4) to switch in electrical switchgears of power stations and substations of the Consumer for the withdrawal of equipment (high-voltage lines), commissioning, liquidation of emergency violations, as well as implementation of measures to impose restrictions on consumers of the Consumer and third-party consumers.

5) in the event of a violation of contractual terms, discontinue provision of technical dispatching of supply to the grid and the consumption of electric power in accordance with civil legislation of the Republic of Kazakhstan.

13. Supplier is Obligated:

1) to provide equal conditions for all participants of the wholesale electricity market;

2) when concluding agreements for the provision of technical dispatching to the grid and consumption of electric power in terms of setting tariffs, to be guided by the decisions of the department of the authorized body;

3) not to allow non-contractual breaks in the filing, termination or restriction of provision of technical dispatching services to the grid and the consumption of electric power;

4) to ensure the reliability of parallel operations of the Consumer as part of the unified power system of the Republic of Kazakhstan, including through the means of emergency control at the facilities of the Consumer and third parties;

5) to carry out technical examination of applications and create conditions for the withdrawal of primary equipment, relay protection and automation equipment, as well as emergency control equipment for the dispatch and technical management of the Consumer in the operational management and management of the national dispatch center of the system operator (regional dispatch center), and to produce necessary switching in electrical networks to ensure the safety of repairs or test production at the objects of the Consumer;

6) to execute the Consumer's requests for restriction of consumers in the absence of payment or untimely payment of the Consumer for the supplied electric power. At the same time, the period for filing the Consumer's application must be at least four days before the restrictions are entered. Responsibility for the unlawful restriction of consumers is borne by the Consumer;

7) in case of a full power loss by a power source (power station) of the Consumer, with the loss of its own needs for power sources (power plants), supplies voltage to the Consumer's energy source tires to restore power to meet its own needs;

8) to inform the Consumer in a timely manner of the causes of the violation of the normal regime of the unified power system of the Republic of Kazakhstan, which led to a violation of the normal operation of the equipment of the Consumer's energy source;

9) to provide the Consumer with technical information, to the extent agreed by the Supplier, on the characteristics and diagrams of transmission lines and substations, and lists of persons directly responsible for the fulfillment of the terms of the Contract and entitled to conduct operational negotiations;

10) to provide technical access to the representatives of the Consumer to obtain full information on the fulfillment by the Supplier of the terms of the Contract;

11) to observe the dispatch-technical discipline, do not allow actions that could lead to a violation of the operating mode of the consumer's energy source;

12) to comply with the requirements of regulatory documents and instructions so as not to cause any damage to the business activities of the Consumer;

13) to coordinate with the Consumer, upon his request, on the necessary operational adjustments to the daily schedule of electricity production-consumption. Do not allow unreasonable refusals to agree on such adjustments;

14) to provide the Consumer with daily information on the volumes of consumption by his direct consumers that are directly connected to the networks of the Supplier;

15) to carry out calculations and study the issues of stability and emergency control in the 110-220-500-1150 kilovolt network that are under the operational control and maintenance of the Supplier;

16) to submit for execution the graphs of the automatic frequency load;

17) to maintain the required level of frequency and voltage at the Supplier's electric power facilities in normal modes in accordance with regulations and standards on the electric power industry;

18) to submit stress graphs at least once a quarter at the control points of the Supplier;

19) to review and agree on annual and monthly schedules of capital and current repairs of electric grid and electric power equipment, relay protection and automation devices and emergency automatics that are under the operational control and maintenance of the Supplier;

20) to perform the necessary calculations and coordination of facilities, development or coordination of principal (structural) circuits for relay protection and automation equipment, and emergency automatics that are under the operational control and maintenance of the Supplier;

21) to ensure compensation for losses incurred to the Consumer in the event he exceeds his powers or takes illegal actions and only if the Consumer fully meets the terms of the Contract

14. Consumer is Obligated:

1) to ensure the proper technical condition of switchgears and emergency control devices located at the Customer's facilities, and devices and complexes of commercial electricity metering in accordance with the requirements of regulatory legal acts on the electric power industry;

2) to comply with the approved daily production schedule – consumption of electricity;

3) to comply with regulatory requirements aimed at maintaining the standard frequency of electrical energy in the unified power system of the Republic of Kazakhstan;

4) to allow the employees of the Supplier access to the devices of commercial accounting, as well as employees of the State Energy Control for monitoring the technical condition and safety of operation of electrical installations in accordance with the regulatory legal acts of the Republic of Kazakhstan on the electric power industry;

5) based on concluded contracts for the supply and/or consumption of electricity to submit to the national dispatch

center of the system operator (regional dispatch center) the hourly schedule of load carried out before 11:00 a.m. on the day preceding the day of execution of the daily schedule;

6) to comply with the requirements of the national dispatch center of the system operator (regional dispatch center) for dispatching the regulation of the electric load and take for execution the daily approved schedule for the production and consumption of electrical energy;

7) all operational adjustments of the daily schedule of the production-consumption of electric energy during the current day are preliminary agreed with the Supplier. The consumer makes an operative adjustment to the current mode after obtaining the approval of the Supplier. Responsibility for the execution of a non-agreed upon _____ with the Supplier of the operational adjustment of the regime shall be borne by the Consumer;

8) to ensure that electricity is accounted for in the required amount;

9) to organize the transfer to the national dispatch center of the system operator (regional dispatch center) of telemetric information on the release of electric energy into the network of the Consumer;

10) to transmit information, volume and receiving time, which are provided by sectoral instructions to the national dispatch center of the system operator (regional dispatch center) for planning long-term, short-term and daily regimes of the unified power system of the Republic of Kazakhstan;

11) to transmit information on the actual volume of electricity supplied during the previous day to the national dispatch center of the system operator (regional dispatch center) daily, before 11:00 o'clock a.m.;

12) to present, at the request of the Supplier, the results of measurements on the generation of active and reactive power for typical working winter and summer days;

13) in January of each calendar year, to submit to the national dispatch center of the system operator (regional dispatch center) technical information, characteristics and schemes of the power plant, the executive schemes of relay protection and automation equipment, and emergency automatics for the organization of communication channels and telemechanics, lists of persons authorized to conduct operational switching and negotiations, as well as lists of persons responsible for the operation of communication facilities, telemechanics, relay protection, automation and emergency response the automatics, as well as timely inform on their changes;

14) to observe the dispatch-technical discipline, prevent actions that may lead to a violation of the operating mode of the power association, comply with the requirements of the directive documents, instructions and provisions on the relationship, and do not cause damage to other entities in the energy market by actions that are incompatible with the Supplier;

15) to promptly and fully inform the national dispatch center of the system operator (regional dispatch center) of all violations of the operating regime, natural phenomena and accidents in accordance with industry regulations;

16) to perform normal operation and maintenance (timely repair and commissioning) of its primary equipment and perform the specifications, volumes and settings of relay protection and emergency automatics, automatic frequency unloading, set by the national dispatch center of the system operator (regional dispatch center);

17) to ensure the transmission by the agreed protocols of the amount of telemetric information required for the purposes of dispatching control, which is determined by the national dispatch center of the system operator (regional dispatch center);

18) for the implementation of operational dispatch management to ensure the organization of a leased line of communication;

19) to ensure the availability of measuring systems for commercial metering of electricity with connection to the Automated System for Commercial Energy Metering (ACEMS) of the Supplier;

20) to pay for the services of the Supplier for technical dispatching in the amount and in the order established by the Contract.

21) not to violate the agreed annual, quarterly, and monthly schedules of capital and current repairs of electric grid, electric and heat power equipment, relay protection and automation equipment, and emergency control equipment under the operational management and maintenance of the Supplier.

15. Consumer has the Right:

1) to request the Supplier to perform the obligations under this Agreement;

2) to challenge the actions of the Supplier in accordance with the legislation of the Republic of Kazakhstan on the

electric power industry.

16. Supplier has the right to suspend or terminate the provision of technical dispatching services if the Consumer does not fulfill his obligations under the Contract, with a preliminary notification of the Consumer of not less than 72 (seventy-two) hours. At the same time, the termination of technical dispatching services is realized by allocating the energy source of the Consumer to isolated work before the Consumer fulfills the terms of the Contract.

17. The parties are required to sign the reconciliation statement of mutual settlements quarterly, within fifteen calendar days from the date of receiving the reconciliation act, as of the last day of the quarter, with or without disagreements.

6. Payment Policy

18. Payment for the services of the Supplier for technical dispatching is performed in accordance with the tariff approved by the authority of the authorized body.

19. In the event of a tariff change, the Supplier shall notify the Consumer in writing or through the mass media about it not later than thirty calendar days before it goes into effect.

The final settlement is made by the Customer within five working days from the date of actual provision of the Supplier's invoice for payment, issued on the basis of the reconciliation of the volume of services rendered.

20. If one of the parties refuses to sign an act of reconciling the readings of commercial accounting devices, a document confirming the actual volume of services rendered is the actual balance.

21. In the presence of debt for prior periods, payment is directed to the repayment of this debt. If the Consumer's payment exceeds the actual amount for the billing period, the difference of this excess is automatically included in the advance payment of the next billing period (or, as agreed by the parties, to pay off the debt of the Consumer for other obligations to the Supplier, if any). If the Consumer refuses the services of the Supplier for the next billing period, the overpaid amounts are returned, except for amounts that are used to pay off the Consumer's debt for other obligations, including money, to the Supplier (if any).

22. If the Consumer disputes the correctness of the invoice, he notifies the Supplier within ten calendar days from the receipt of the invoice and submits a written statement of objections to the Supplier. At the same time, the Consumer is obliged to pay the undisputed part of the invoice in the above-mentioned terms.

23. The fulfillment of the obligations of the Consumer for the payment of the services of the Supplier for the technical dispatching of the supply to the grid and the consumption of electric energy shall be recognized as the transfer of money to the current account of the Supplier to the details specified in the invoice or to the current account of the third party in respect of the details specified by the Supplier in the notification sent to the Consumer.

24. After signing the reconciliation of volumes, if an instrumentation malfunction is detected, the Supplier shall issue an additional invoice on the basis of an adjusted reconciliation certificate signed on both sides in the subsequent billing period.

7. Liabilities of the Parties

25. For non-fulfillment or improper fulfillment of obligations under this Contract, the parties bear responsibility in accordance with the civil legislation of the Republic of Kazakhstan.

26. For non-payment of the invoice by the time of the payment due date, the Supplier shall be entitled to charge a penalty on the amounts unpaid by the Consumer starting from the day following the expiration of the due date. For overdue amounts, the Supplier shall be entitled to demand from the Consumer a penalty payment calculated on the basis of the 1.5 fold refinancing rate established by the National Bank of the Republic of Kazakhstan on the day of actual execution by the Consumer of the monetary obligation for each day of delay in payment.

27. In the case of non-payment within the terms provided for in this Contract, the Supplier may determine the mode of operation in accordance with Clause 16 of the Contract, which shall notify the Consumer not less than 72 (seventy two) hours prior to the introduction of restrictions.

28. The Supplier shall not be liable to the Consumer for violation of the operating mode of the Consumer's energy source caused by:

1) Circumstances of insuperable force occurrence;

2) industrial accidents and technological infringements on the facilities of the electric power industry of the energy market entities not participating in this Contract;

3) the lack of communication or information provided for by industry instructions through the fault of the Consumer;

- 4) incorrect actions of the Customer's personnel;
 - 5) circumstances stipulated by subparagraphs 2) and 3) of clause 12 and clause 16 of this Contract;
 - 6) the operation of the emergency control system in the places and volumes specified by the national dispatch center of the system operator (regional dispatch center).
29. The Supplier shall not be liable for the quality of the services provided for technical dispatching in the event of incomplete or improper fulfillment by the Consumer of his obligations under the Contract.

8. Circumstances of Insuperable Force

30. The parties are exempted from liability for non-fulfillment or improper performance of obligations under the Contract, if this was a consequence of force majeure circumstances. In this case, neither party will have the right to recover damages. At the request of any of the parties in this case, a commission may be created that determines the fulfillment of mutual obligations. At the same time, neither party is exempt from obligations under the Contract, arising before the occurrence of force majeure circumstances.

31. If one of the parties fails to fulfill its obligations under the Contract within sixty calendar days from the date of the occurrence of force majeure circumstances, the other party has the right to terminate the Contract.

9. Miscellaneous

32. The Contract for the provision of services for technical dispatching of supply to the grid and consumption of electrical energy shall be concluded with the Consumer individually.

33. The relations of the parties arising from the Contract and not regulated by it are regulated by the civil legislation of the Republic of Kazakhstan.

34. The Contract shall be made in two copies in the state and Russian languages, one copy for each Party.

The contract for state institutions financed from the state budget is registered in the territorial bodies of the Treasury of the Ministry of Finance of the Republic of Kazakhstan and comes into effect from the day of its registration.

10. Contract Validity Period

35. The contract comes into force from 00:00 o'clock «___» _____20___ and is valid until 24:00 o'clock «___» _____20__ (Central European time – Greenwich mean time plus one hour).

36. The term of the Contract is extended for a certain period, with specification of the volume of services for technical dispatching of supply to the grid and consumption of electric energy. If one of the parties declares this thirty calendar days before the expiration of the Contract, extension of the Contract term is formalized by an additional agreement to the Contract.

11. Legal Details of the Parties

ANNEXES TO CHAPTER 6

ANNEX 13

APPLICATION FOR THE PROVISION OF SOURCE MATERIALS / ARCHITECTURAL PLANNING SPECIFICATIONS AND TECHNICAL SPECIFICATIONS/ SOURCE MATERIALS FOR THE RECONSTRUCTION (REMODELING, REEQUIPPING) OF PREMISES, (INDIVIDUAL PARTS OF) EXISTING BUILDINGS AND STRUCTURES ASSOCIATED WITH THE CHANGING OF BUILDING FRAMES AND ENVELOPES, ENGINEERING SYSTEMS AND EQUIPMENT

Name of the applicant: _____

(Full name of a natural person or the name of the legal entity)

Address: _____

Phone: _____

Customer: _____

Name of the designed facility: _____

Address of the designed facility: _____

I am kindly asking You to issue the following:

Package 1 Source materials for new construction (architectural planning specifications (hereinafter referred to as APS), vertical design elevations, extracts of the detailed design plan, standard cross profiles of roads and streets, technical specifications (hereinafter referred to as TS), layout scheme of external utility networks);

Package 2. APS and TS;

Package 3. Source materials for the reconstruction (remodeling, reequipping) of premises, (individual parts of) existing buildings and structures (the decision of the LEA for the reconstruction (remodeling, reequipping) of premises, (individual parts) of the existing buildings and structures, associated with the changing of building frames and envelopes, engineering systems and equipment, APS, TS, layout scheme of external utility networks).

I am kindly asking You to issue the copy of:

Package 1 Source materials for new construction (APS, vertical design elevations, extracts of the detailed design plan, standard cross profiles of roads and streets, TS, layout scheme of external utility networks

Package 2. APS and TS;

Package 3. Source materials for the reconstruction (remodeling, reequipping) of premises, (individual parts of) existing buildings and structures (the decision of the LEA for the reconstruction (remodeling, reequipping) of premises, (individual parts) of the existing buildings and structures, associated with the changing of building frames and envelopes, engineering systems and equipment, APS, TS, layout scheme of external utility networks

I give consent to the use of information contained in information systems that constitutes a secret protected by law.

Date: « _____ » _____ 20__

Submitted by: _____

Signature

ANNEX 14

INPUT DATA FORM

FOR TECHNICAL SPECIFICATIONS FOR CONNECTION TO SOURCES OF ENGINEERING AND UTILITY PROVISION

Client	-						
Facility name	-						
Construction period, according to norms	-						
Document of entitlement for the facility (renovating)	-						
Number of floors	-						
Size of the facility	-						
Number of apartments (suites, offices)	-						
Power supply	Power requirements, kW	-					
	Type of burden (phase)	Single-phase, three-phase, permanent, temporary, seasonal					
	Reliability rating	Category I kW (kVA), Category II kW (kVA), Category III kW (kVA)					
	Maximum burden after commissioning by years (cumulative, taking into account existing burden)						
		20 _____ kW, 20 _____ kW, 20 _____ kW					
	of the specified max. burdens, electric receivers refer to:						
		Category I kW (kVA), Category II kW (kVA), Category III kW (kVA)					
	It is proposed to install electric boilers, electric heaters, electric hot plates, electric ovens, electric water heaters (<u>underline</u>)	total _____ pcs., unit power _____ kW (kVA)					
	Existing maximum burden	-					
	Authorized transformer capacity	In TP no. _____ kVA In TP no. _____ kVA					
Water supply	Total water requirement	_____	m ³ /day	—	m ³ /hour drinking water	_____	l/sec max.
	including						

	Drinking quality water	—	m ³ /day	—	m ³ /hour	—	l/sec max.
	Industrial water	—	m ³ /day	—	m ³ /hour	—	l/sec max.
	Fire extinguishment flow demand	—	l/sec				
Sewerage	Total wastewater	—	m ³ /day	—	m ³ /h. max		
	including						
	feces water	—	m ³ /day	—	m ³ /h. max		
	Industrially polluted water	---	m ³ /day	—	m ³ /h. max		
	Conditionally clean water discharged into the city sewer	—	m ³ /day	—	m ³ /h. max		
Qualitative composition and characteristics of industrial effluents (pH, suspended solids, BH concentration of acids, alkalis, explosives, inflammable radioactive substances, etc.)							
Heat supply	General heat load				_____ Gcal/hr		
					including:		
	Heating				_____ Gcal/hr		
	Ventilation				_____ Gcal/hr		
	Hot water supply				_____ Gcal/hr		
	Process needs (vapor)				_____ t/h		
	Separate the load into housing and built-in premises				-		
	Energy-saving activity				-		
Storm collector	Customer adaptation				-		
Installation of telephone system	Number of PTAs and services, broken down by individuals and legal entities				-		
	Fitted capacity				-		
	Planned telephone conduit				-		
	Customer adaptation (equipment type, cable type and others)				-		

Gas supply	General demand	___ m ³ /hour
		including:
	For cooking	___ m ³ /h
	Heating	___ m ³ /h
	Ventilation	___ m ³ /h
	Air Conditioning	___ m ³ /h
	Hot water supply for gasification of multi-story buildings	___ m ³ /h

Note *

* When a sub-consumer submits the input data form, the note indicates the consumer's consent to be connected to his sub-consumer's networks. At the same time, the consumer's consent shall include his data (individuals— signature, legal entities — signature and seal

Client:

« ___ » _____ 20 __.

ANNEX 15

SCHEMATIC DESIGN APPROVAL

Application

Name of the applicant: _____

(Full name (if available) of the individual or the name of the legal entity)

Address: _____

Phone: _____

Customer _____

Designer GSL license no., category: _____

Name

Name of the designed facility:

Address of the designed facility:

Please review and approve the design (schematic design)

Attached:

- Design (schematic design)
- Architectural and planning specifications (copy)
- ID (copy)
- ID of the attorney (copy)
- Power of Attorney (copy)

Accepted by (signature) _____

Date : "___" _____ 20__.

Handed over by (signature) _____

ANNEX 16

THE TASK OF DESIGNING OBJECTS FOR INDUSTRIAL PURPOSES

(Name and location of the company, object, building, site)

No	List of basic data and requirements
1	The basis for the design.
2	Type of construction.
3	Design stages.
4	Requirements for optional and bidding design.
5	Special construction conditions.
6	The main technical and economic indicators of the facility, including capacity, productivity, and production program.
7	Basic requirements for engineering equipment.
8	Requirements for quality, competitiveness and environmental parameters of products.
9	Requirements for technology, enterprise mode.
10	Requirements for architecture and construction, space-planning and design solutions, taking into account the creation of accessible environments for the disabled.
11	Requirements and scope of development of the construction organization.
12	Allocation of schedules, including start-up complexes and stages, requirements for future expansion of the enterprise.
13	Requirements and conditions for the development of environmental measures.
14	Requirements for safety and health at work.
15	Requirements for the development of civil engineering activities.
16	Requirements for the implementation of development and research work.
17	Energy saving requirements.
18	The composition of the demonstration materials

Note. The composition of the design assignment is established taking into account the industry specifics and type of construction. Together with the design assignment, in addition to the source materials (data) given in paragraph 5.4 of this standard, the Customer may issue the following source documents and materials to the project organization:

- feasibility study of the construction of the object (investment) or other pre-project document approved in the prescribed manner;
- decision of the local executive authority on preliminary approval of the location of the facility;
- the act of choosing a land plot (route) for construction and the materials attached to it;
- information on public discussions of decisions on the construction of the facility;

- initial data on the equipment, including individual production;
- the necessary data on the research and development work performed in relation to the creation of technical processes and equipment;
- inventory materials, evaluation acts and decisions of the local administration on the demolition and the nature of compensation for demolished buildings and structures;
- materials received from the local administration and state supervision bodies, including the characteristics of the socio-economic situation, natural conditions and the state of the natural environment, data on existing sources of pollution and other information in accordance with the requirements of environmental authorities, sanitary and epidemiological conditions in the construction area;
- available materials of inspections and assessment of technical condition, measurement drawings of existing buildings and structures, and underground and above – ground networks and communications;
- drawings and technical characteristics of the Company's products;
- the conclusions and materials executed as a result of inspections of the operating productions, designs of buildings and constructions;
- technical planning of existing workshops and sites with the specification of equipment and information about its condition, and data on conditions in the workplace;
- conditions for the placement of temporary buildings and structures, lifting and transport machines and mechanisms, and places of storage of building materials;
- other data and requirements as agreed by the parties.

ANNEX 17

CONTACTS OF SPECIALIZED PROJECT ORGANIZATIONS THAT DEVELOP FEASIBILITY STUDIES OR PROVIDE DESIGN AND ESTIMATES DOCUMENTATION

Elorda Project, LLP

tel: +7 (717) 226-62-79

Address: Astana, Saryarka Ave., 31/2

elordaproject.kz

Institute ArkhStroyProject LLP Branch

tel.: +7 (717) 227-34-64

Address: Astana, Imanova. Str, 13

Constructive-A LLP

tel.: +7 (717) 259-26-75

Address: Astana, Baraeva Str. 16

Firm Kazenergonaladka LLP

tel.: 8 (727) 2794242, 2794343, 2796110

fax: 8 (727) 2794363

Address: Almaty, Seifullin Ave., 410

E-mail: ken@ken.kz

KAZGIDRO LLP

tel.: + 7 727 273-45-15

fax: + 7 727 273-17-43

Address: Almaty, Saġadat Nurmaġambetov Str., 2/27

KazNII energetiki im. akademika Sh. Ch. Chokina JSC

tel: + 7 (727) 292-24-54

Address: Almaty, Baytursynuly Str., 85

e-mail: kaznienerg@mail.ru

Institute of Kazselenergooproekt LLP

tel.: + 7 (727) 346-83-44

Address: Almaty, Abay Ave. 151/115, Business Center "Alatau"

e-mail: info@kazsep.kz

TOO "Energy System Researches"

tel: +7 727 293 70 97

Address: Almaty, Zhambyl Str., 114/85

e-mail: info@esr.kz

e-mail: esr.almaty@gmail.com

ANNEX 18

CONTACTS OF THE RSE GOSEXPERTIZA

RSE Gosexpertiza (State non-departmental expertise on projects) is a state-owned enterprise responsible for the economic management of the Construction, Housing and Utilities Committee of the Ministry of Investments and Development of the Republic of Kazakhstan.

Address: 100000, 7 Kultobe Lane, Astana

Contact phones: reception 8 (7172) 57-44-84, secretariat (7172) 57-42-44

Questions related to pre-expert work 8: (7172) 57-42-28,
questions related to contracting: 8 (7172) 57-43-02, 57-38-40

E-mail: gosexpertiza@gosexpertiza.kz, **Website address:** www.gosexpertiza.kz

Almaty City Branch of the RSE Gosexpertiza

<http://almaty.gosexpertiza.kz/>

Aktobe Region Branch of the RSE Gosexpertiza

<http://aktobe.gosexpertiza.kz/>

Operations department in the city of Atyrau of the Western Region Branch of the RSE Gosexpertiza

<http://atyrau.gosexpertiza.kz/>

Eastern Region Branch of the RSE Gosexpertiza

<http://east.gosexpertiza.kz/>

Operations department in the city of Taraz of the Southern Region Branch of the RSE Gosexpertiza

<http://zhambyl.gosexpertiza.kz/>

Western Kazakhstan Region Branch of the RSE Gosexpertiza

<http://west.gosexpertiza.kz/>

Karaganda Region Branch of the RSE Gosexpertiza

<http://kar.gosexpertiza.kz/>

Northern Region Branch of the RSE Gosexpertiza

<http://kokshetau.gosexpertiza.kz/>

Operations department in the city of Petropavlovsk of the Northern Region Branch of the RSE Gosexpertiza

<http://north.gosexpertiza.kz/>

Kostanay Region Branch of the RSE Gosexpertiza

<http://kostanay.gosexpertiza.kz/>

Kyzylorda Region Branch of the RSE Gosexpertiza

<http://kyzylorda.gosexpertiza.kz/>

Western Region Branch of the RSE Gosexpertiza

<http://aktau.gosexpertiza.kz/>

Pavlodar Region Branch of the RSE Gosexpertiza

<http://pavlodar.gosexpertiza.kz/>

Almaty Region Branch of the RSE Gosexpertiza

<http://taldykorgan.gosexpertiza.kz/>

Southern Region Branch of the RSE Gosexpertiza

<http://south.gosexpertiza.kz/>

ANNEX 19

THE LIST OF DOCUMENTS (MATERIALS) SUBMITTED FOR COMPREHENSIVE INDEPENDENT EXAMINATION OF PROJECTS FOR THE CONSTRUCTION OF NEW FACILITIES

The following documents are to be attached to the Customer's application (along with details) for a comprehensive non-departmental examination of projects for the construction of new facilities. The application is to be submitted through a single portal:

1. Source documents that are the basis for the development of the feasibility study or design & estimates documentation (DED) for the construction of new buildings and their structures, complexes, and engineering and transport communications:

1) the Customer's decision to invest in the project with the planned terms and duration of the investment cycle as a whole;

2) title document for the land plot;

3) materials of engineering surveys of the construction site (within the boundaries of the land plot and routes of laying communications) necessary for the design of new construction or expansion of an existing facility. For the preparation of the feasibility study, the stock materials available at local executive bodies are used along with the results of engineering surveys conducted and executed no later than 5 (five) years before they are provided to the customer;

4) technical terms (with slope diagrams):

on connection to the sources of engineering and transport support issued by the operating organizations;

at the intersection of the projected engineering or transport communications with existing linear structures or with tunnels and bridge structures along the route, to be issued by the owners;

The term of validity of the technical conditions issued to the Customer is not allowed to change before the acceptance of the constructed facility into operation, except as provided by legislation of the Republic of Kazakhstan on architecture, urban planning and construction;

5) the architectural and planning task of the location's (city of republican significance, capital, cities of regional significance, districts) executive body for architecture, urban planning and construction, including the agreed conditions of engineering preparation of the territory, landscaping and landscaping;

6) the design assignment (project development) approved by the Customer. The procedure for the preparation, and approval of the design assignment, as well as the development of feasibility studies or DED and their composition are determined by state construction norms and rules;

7) in cases where the need for adjustment and re-approval of the DED arise during construction, information on the state of construction and copies of acts of work performed are included in the documentation submitted for a new comprehensive non-departmental examination and re-approval. For budget investment projects, as well as other state investment projects, the decision of the relevant budget Commission is also submitted;

8) other approvals of the construction project, provided by the legislation of the Republic of Kazakhstan and regulatory and technical documents on architecture, urban planning and construction, as well as on industrial safety of hazardous production facilities;

9) for projects for the construction of unique objects special technical conditions (special norms) on which the project is developed are represented.

2. Special (additional) source documents required for the environmental assessment of projects:

materials on environmental impact assessment, issued in the form of a document, the level of development of which corresponds to the design stages;

results of public opinion accounting for objects in accordance with [paragraph 1 of Article 57-2](#) of the Environmental Code of the Republic of Kazakhstan;

materials confirming the publication of the announcement of public hearings in the media;

3. Special (additional) source documents required for sanitary and epidemiological expertise of projects:

coordination with territorial divisions of the public authority department overseeing sanitary and epidemiological welfare of the population of project documentation on the establishment of the zone of sanitary protection of surface and/or underground sources of water supply;

master plan of urban and rural settlements, resort areas, planning and development of settlements.

4. Project materials are completed in accordance with the requirements of [paragraph 15](#) of the Rules:

- 1) establishing rules for development, agreement, approval and composition of feasibility studies for the construction;
- 2) determining the procedure for the development, approval and composition of construction documentation (DED).

5. Information about the customer and the developer of the project submitted for examination:

1) copies of the customer's documents stipulated by the legislation on state registration of legal entities, taxes and other obligatory payments;

2) Bank details of the customer;

3) license of the legal entity – developer of the project (general design and subproject organizations) with annexes thereto and an indication of the category of the licensee entitling to this type of project activity;

4) calculation of the cost of design (design and survey) works;

5) a customer-approved list of materials, products, structures, engineering and technological equipment, and other material resources used in the project, including the price lists with their application and price for one unit of their measurement.

ANNEXES TO CHAPTER 8

ANNEX 20

TO THE STANDARD OF PUBLIC SERVICE: THE ISSUE OF THE ENVIRONMENTAL EMISSIONS PERMIT

Application for the environmental emissions permit for category II and III facilities

(name of the natural resource user)

(legal address of the applying organization or the residential address of the individual)

I. General information

Contact phone numbers, fax _____

The name of the industrial facility that is the subject of the application

Natural resource user category (industrial facility hazard class)

Individual Identification Number / Business Identification Number

2. Data on the location of the industrial sites where the sources of environmental pollution of the industrial facility are located:

Table I. Data on the location of the industrial sites

Industrial site number	Industrial site name	Region	District, settlement	Coordinates, degrees, minutes, seconds		Occupied territory, ha
				latitude	longitude	
1	2	3	4	5	6	7

3. The proposed limits for emissions (discharges) of pollutants and stored waste (sulfur) by years:

Table 2. Pollutant emission limits

Name of the state environmental expert reviewing conclusions	Number and date of issue of the state environmental expert review conclusions	Permitted volumes of pollutants emissions	Proposed limits of air pollutants emissions	Actual emissions during the year preceding the submission of the application
		ton/year	ton/year	ton/year
I	2	3	4	5
for 20__ year				
Total, of which by sites:				
Site I				
Site 2, etc.				

Table 3. Pollutant discharge limits

Name of the state environmental expert reviewing conclusions	Number and date of issue of the state environmental expert review conclusions	Permitted volumes of pollutants discharge	Proposed limits of pollutants discharge	Actual discharge volume during the year preceding the submission of the application
		ton/year	ton/year	ton/year
I	2	3	4	5
for 20__ year				
Total, of which by discharge outlets:				
Discharge outlet I				
Discharge outlet 2, etc.				

Table 4. Limits on storage of production and consumption wastes

Name of the state environmental expert reviewing conclusions	Number and date of issue of the state environmental expert review conclusions	Permitted volumes of waste	Proposed limits of waste	Actual volume of stored waste during the year preceding the submission of the application
		ton/year	ton/year	ton/year
I	2	3	4	5
for 20__ year				
Total, of which by sites:				
Site I				
Site 2, etc.				

Table 5. Limits for sulfur storage

Name of the state environmental expert reviewing conclusions	Number and date of issue of the state environmental expert review conclusions	Permitted volumes of sulfur	Proposed limits of sulfur	Actual volume of stored sulfur during the year preceding the submission of the application
		ton/year	ton/year	ton/year
I	2	3	4	5
for 20__ year				
Total, of which by sites:				
Site I				
Site 2, etc.				

Natural resource use terms proposed by the natural resource user:

We hereby certify that the environmental emissions will correspond to those claimed in this application

4. The application is attached with the following documents:

I give consent for the use of the information that constitutes secrets protected by law and is contained in information systems.

Authorized

(individual) _____

(personal signature) (print full name)

"__" _____ 20 __ year.

Seal (if available)

Application for the environmental emissions permit for Category IV facilities

(name of the natural resource user)

(legal address of the applying organization or residential address of the individual)

I. General information

Contact phone numbers, fax

The name of the industrial facility that is the subject of the application

Natural resource user category (industrial facility hazard class)

Individual Identification Number / Business Identification Number

2. Data on the location of the industrial sites where the sources of environmental pollution of the industrial facility are located:

Table 1. Data on the location of industrial sites

Industrial site number	Industrial site name	Region	District, settlement	Coordinates, degrees, minutes, seconds		Occupied territory, ha
				latitude	longitude	
I	2	3	4	5	6	7

3. The proposed limits for emissions (discharges) of pollutants and stored waste (sulfur):

Table 2. Pollutant emissions limits

Pollutant name	Permitted volumes of pollutants emissions		Proposed volumes of air pollutants emissions		Actual emissions during the year preceding the submission of the application	
	gram /sec	ton/ year	gram /sec	ton/ year	gram /sec	ton/ year
I	2	3	4	5	6	7
Total, of which by site:						
Site I						

including by ingredients:						
Site 2						
including by ingredients:						

Table 3. Pollutant discharge limits

Pollutant name	Permitted volumes of pollutants discharge		Proposed limits of pollutants discharge		Actual discharge volume during the year preceding the submission of the application	
	gram /hr	ton/ year	gram /hr	ton/ year	gram /hr	ton/ year
I	2	3	4	5	6	7
Total, of which by discharge outlet:						
Discharge outlet 1						
including by ingredients:						
Discharge outlet 2						
including by ingredients:						

Table 4. Limits on storage of production and consumption wastes

Name of waste	Waste hazard level	Storage location	Permitted volumes of waste	Proposed limits of waste	Actual volume of stored waste during the year preceding the submission of the application
			ton/ year	ton/ year	ton/ year
I	2	3	4	5	6
Total, of which by sites					
Site 1					

including by types:					
Site 2					
including by types:					

Table 5. Limits for sulfur storage

Name	Storage location	Permitted sulfur volumes	Proposed sulfur limits	Actual volume of stored sulfur during the year preceding the submission of the application
		ton/ year	ton/ year	ton/ year
I	2	3	4	5
Total:				
Site 1				
Site 2				

Natural resource use terms proposed by the natural resource user:

We hereby certify that the environmental emissions will correspond to those claimed in this application

4. The application is attached with the following documents:

I give consent for the use of the information that constitutes secrets protected by law and is contained in information systems.

Authorized

(individual) _____

(personal signature) (print full name)

" __ " _____ 20 __ year.

Seal (if available)

ANEXES TO CHAPTER 8

ANNEX 21

NOTIFICATION ON THE COMMENCEMENT OF CONSTRUCTION AND INSTALLATION WORK

On the construction of a new facility:

The Chief State Construction Inspector (region, city of national importance, capital)

(surname, name, patronymic (if any))

From the customer (builder) _____

(surname, name, patronymic (if any) – for individuals, name of organization – for legal entities, postal code, region, city, district, town, street name, house / building number (stationary room) and telephone number)

I hereby provide notification of the commencement of construction and installation work at the facility

(name and location of the facility)

Start of construction « ____ » _____ 20 ____

Commissioning time « ____ » _____ 20 ____

Source of financing _____.

I herewith inform:

1. Decision to grant the relevant right to land was issued

(name of local executive body)

dated « ____ » _____ 20 ____ no. ____.

2. Design (design and estimate) documentation for the construction of the facility is developed by

(name of the project organization, no., date of receipt and category of license, design stage)

and approved by _____

(name of organization, number and date of order)

3. Positive expert opinion (in case of mandatory examination) is issued from « ____ » _____ no.

(type of expertise, surname, name, patronymic (if any), telephone number, number and date of receipt, and specialization of the certificate of the expert, name, postal address and telephone number of the organization that carried out the examination, number and date of receipt of the accreditation certificate (in the case of an examination by an accredited organization))

4. Facility refers to _____

(first – high, second – normal or third – low)

criticality rating.

5. Term of the standard construction duration approved in the project (design and estimate) documentation is _____ month (-s).

6. The work will be done in a contract way

(name of construction organization, address, telephone number, date, and license category)

on the basis of a contract of employment dated «___» _____ 20 ___ no.____.

7. Decision on the corresponding stages of construction in the mode of expert support (in case stage-by-stage construction is provided) dated «___» _____ 20 ___ no._____.

8. Client's responsible person by the order no. _____ dated «___» _____ 20___ is appointed

(surname, name, patronymic (if any), position)

with a degree of

(name of educational institution, year of graduation, major)

9. General Contractor's responsible person by the order no._____ dated «___»_____ 20___ is appointed

(surname, name, patronymic (if any), position, name of organization)

with a degree of

(name of educational institution, year of graduation, major)

and work experience in construction _____ years, trained and having a valid certificate for the course "seismic construction" (in case of construction in seismic regions)

(ID no., issued or extended by)

10. Author's supervision will be carried out by (fill in necessary items):

1) project developer _____

(name of organization, no., date of issue and license category, address and phone)

In the person of

(surname, name, patronymic (if any), position)

in accordance with the order dated «___» _____ 20 ___ no. _____;

2) organization _____

(name of organization, address and phone)

having on its team certified expert(s) _____

(surname, name, patronymic (if any) of an expert, no., date and specialization of the certificate)

in accordance with the contract dated «___» _____ 20 ___ no. _____;

3) expert _____

(surname, name, patronymic (if any) of then expert, no., date and specialization of the certificate, address and phone)

in accordance with the contract dated «___» _____ 20 ___ no. _____.

11. Technical supervision will be carried out by (fill in necessary sub-items):

1) the customer itself, employing a state-certified expert(s)

(surname, name, patronymic (if any) of an expert, no., date and specialization of the certificate, no. and date of accreditation license (if any)

Appointed by the order dated « ___ » _____ 20 ___ no. ____,

2) by _____

(name of organization, address and phone, no., date and specialization of the certificate, no. and date of accreditation license (if any)

employing a state-certified expert(s)

(surname, name, patronymic (if any) of an expert, no., date and specialization of the certificate)

in accordance with contract dated « ___ » _____ 20 ___ no. ____,

3) expert _____

(surname, name, patronymic (if any), no., of an expert, no., date and specialization of the certificate, address and phone)

in accordance with contract dated « ___ » _____ 20 ___ no. ____.

12. I am obliged to notify, in due time, the bodies of state of architectural and construction control and supervision of all changes related to information provided in this notification.

13. By submitting this notice, I confirm that:

1) all specified data are official and any information on the implementation of activities or individual actions may be sent to on it

2) the attached documents are true and valid;

3) compliance with the requirements of the legislation of the Republic of Kazakhstan, mandatory for execution prior to the commencement of construction and installation works.

14. We are aware that for the violation of construction norms and requirements of the legislation on architecture, urban planning and construction and the approved project in the implementation of construction and installation works will be responsible in accordance with the Code of the Republic of Kazakhstan on Administrative Offenses.

Client (builder)

General Contractor

(surname, name, patronymic (if any),
position)

(surname, name, patronymic (if any),
position)

IIN/ BIN _____
(for individuals and/or legal entities)

IIN/ BIN _____
(for individuals and/or legal entities)

(signature, date)

(signature, date)

Seal (if any)

Seal (if any)

In case of submitting by power of attorney:

proxy

holder:

surname, name, patronymic (if any)

Submission date: « ____ » _____ 20 ____.

On reconstruction (re-planning, re-equipment) of premises (separate parts) of existing buildings:

To the Chief State Construction Inspector (*oblast*, city of national importance, capital)

(surname, name, patronymic (if any))

From client (builder)

(surname, name, patronymic (if any) – for individuals, name of organization – for legal entities, postal address and phone)

I hereby provide notification of the beginning of construction and installation works for reconstruction (re-planning, re-equipment) of the premises (separate parts) of existing buildings

(name and location)

Construction start date « ____ » _____ 20 ____

Commissioning date « ____ » _____ 20 ____

I herewith inform:

1. Decision of the relevant local executive body, which carries out functions in architecture and urban planning on the reconstruction (re-planning, re-equipment) of premises (separate parts) of existing buildings

(name of local executive body)

dated « ____ » _____ 20 ____ no. ____.

2. Documents certifying ownership of a variable premise (part of a building), issued _____

(name of the documents, name of the issuing authority)

dated « ____ » _____ 20 ____ no. ____, or a notarized written consent of the owner (owners) of the premises or parts of the building to their change certified by

(address of the notary's office, surname, name, patronymic (if any) of the certifying person)

is available.

3. Decision to grant the relevant right to land was issued (in case the planned change provides for the withdrawal of an additional land plot)

(name of local executive body)

dated « ____ » _____ 20 ____ no. ____.

4. Design (design and estimate) documentation for reconstruction (re-planning, re-equipment) of premises (separate parts) of existing buildings is developed by

(name of project organization, no., date and license category, project stage)

in accordance with architectural and planning specifications dated « ____ »

_____ 20__ no. _____, issued by

(name of local executive body)

and approved by _____

(surname, name, patronymic (if any) and/or no. and date of order)

5. Positive expert opinion (in case of mandatory examination) dated «__» _____ no.

(type of expertise, surname, name, patronymic (if any), telephone number, number, date of receipt and specialization of the certificate of the expert, name, postal address and telephone number of the organization that carried out the examination, number and receiving date of accreditation certificate (in the case of examination by an accredited organization))

6. Notarized written consent of the owners of other premises adjacent to the modifiable premises (in cases where the planned reconstruction of the premises) or the transfer of the boundaries of premises that affect their interests) dated «__» _____

20__, notarized by

(address of the notary's office, surname, name, patronymic (if any) of the certifying person)

is available.

7. The work will be carried out in a contract way (in case of contractor organization)

(name of construction organization, address, telephone number, date, and license category)

on the basis of a contract of employment dated «__» _____ 20__ no. _____.

8. Client's responsible person by the order no. _____ dated «__» _____ 20__ is appointed (if applicable)

(surname, name, patronymic (if any), position)

with a degree of

(name of educational institution, year of graduation, major)

9. Responsible person for reconstruction (re-planning, re-equipment) from the general contractor by order no. _____ dated «__» _____ 20__ is appointed (if applicable)

(surname, name, patronymic (if any), position, name of organization)

with a degree of

(name of educational institution, year of graduation, major)

and work experience in construction _____ years, trained and having a valid certificate for the "seismic construction" course (in case of construction in seismic regions)

(ID no., issued or renewed by)

10. Author's supervision will be carried out by (fill in necessary items):

1) project developer _____

(name of organization, no., date of issue and license category, address and phone)

In

person

of

(surname, name, patronymic (if any), position)

in accordance with the order dated « ___ » _____ 20 ___ no. _____;

2) organization

(name of organization, address and phone)

having in its team a certified expert(s)

(expert's surname, name, patronymic (if any), certificate no. and date, and specialization)

in accordance with Contract dated « ___ » _____ 20 ___ no. _____;

3) expert _____,

(expert's surname, name, patronymic (if any), no., certificate's date and specialization, address and phone)

in accordance with Contract dated « ___ » _____ 20 ___ no. _____.

11. Technical supervision will be carried out by (fill in necessary items):

1) client, employing a certified expert(s)

(expert's surname, name, patronymic (if any), certificate no. and date, and specialization, no. and date of license (if any))

assigned by order dated « ___ » _____ 20 ___ no. _____,

2) organization _____,

(name of organization, address and phone, no. and date of license (if any))

employing a certified expert(s) _____

(expert's surname, name, patronymic (if any), certificate's date and specialization, no.)

in accordance with Contract dated « ___ » _____ 20 ___ no. _____,

3) expert _____

(expert's surname, name, patronymic (if any) эксперта, certificate's date and specialization, no., address and phone)

in accordance with Contract dated « ___ » _____ 20 ___ no. _____.

12. I am obliged to notify in due time all the changes related to information provided in this notification to the bodies of state of architectural and construction control and supervision.

13. By submitting this notice, I confirm:

1) all specified data are official and any information on the implementation of activities or individual actions may be sent on it;

2) the attached documents are true and valid;

3) compliance with the requirements of the legislation of the Republic of Kazakhstan, mandatory for execution prior to the commencement of construction and installation works.

14. We are aware that for the violation of construction norms and requirements of the legislation on architecture, urban planning and construction and the approved project in the implementation of construction and installation work will be responsible in accordance with the Code of the Republic of Kazakhstan on Administrative Offenses.

Client (builder)

General Contractor

(surname, name, patronymic (if any),
position)

IIN/ BIN _____

(for individuals and/or legal entities)

(signature, date)

Seal (if any)

If submitted by power of attorney:

proxy

(surname, name, patronymic (if any),
position)

IIN/ BIN _____

(for individuals and/or legal entities)

(signature, date)

Seal (if any)

holder:

surname, name, patronymic (if any)

Submission date: « ____ » _____ 20____.

ANNEX NO. 22

FACILITY OPERATIONAL ACCEPTANCE CERTIFICATE

« ____ » _____ 20

Client

surname, name, patronymic (if any) – for individuals, organization's name – for legal entities, postal code, *oblast*, city, district, locality, street, building's no. (facility)

under authority of:

Declaration of Conformance _____

date of the declaration, name of the contractor (general contractor) organization, surname, name, patronymic (if any) the head, legal address

Conclusions on the quality of construction and installation works

date of signing, organization's name, engineering supervision expert's surname, name, patronymic (if any), no. and date of certificate _____

Conclusions on the compliance with the project _____

date of signing, organization's name, designer supervisor's surname, name, patronymic (if any), no. and date of certificates, inspection of the facility presented by the contractor (general contractor) for acceptance:

name of the facility and type of construction (new, expansion, reconstruction, technical re-equipment, modernization, major repairs), address

(region, district, locality, neighborhood, block, street, house number (building))

after checking the completeness of executive technical documentation, confirms that:

I. Construction of the facility was carried out on the basis of:

1) decision (act) on granting corresponding right to land

dated « ____ » _____ 20__ no. _____;

name of the body that issued act or decision on reconstruction (re-planning, re-equipment) of the premises (separate parts) of existing buildings dated « ____ » _____ 20__ no. _____;

name of issuing body

2) notice on the commencement or termination of an activity or certain actions

name of body that accepted the notice, notice date of issuance

3) design (design specifications and estimates) _____

name of project organization, project number, approved by

name of organization of the approved (re-approved) project and date of approval

2. Construction and installation works were carried out within the timeframe:

start date _____;
month, year

end date _____;
month, year

with the duration of construction, month:

according to the norm or organization's design of construction, month: _____;

actual, month: _____;

3. Facility (complex) has the following basic technical and economic indicators (capacity, productivity, production area, length, capacity, volume, capacity, carrying capacity, number of jobs, etc., is filled in all facilities (except for residential buildings) in units of measurement, according to the target product or main types of services):

Power, capacity etc.	Unit of measurement	According to design		Actual	
		general (taking into account previously adopted)	including start-up complex or turn	general (taking into account previously adopted)	including start-up complex or turn

Output of products (services) provided by the project in the amount corresponding to the norms of development of design capacities in the initial period

_____;

production start and volume

Residential building has following indicators:

Indicators	Unit of measurement	According to design	Actual		
Gross floor area	square meter (hereinafter, m ²)				
Number of floors	Floor				
Total structural volume	cubic meter (hereinafter, m ³)				
Including underground portion	m ³				
Area of built-in and attached buildings	m ²				
Indicators	According to design		Actual		
	number of flats	area of flats, m ²	number of flats	area of flats, m ²	
		total		habitable	total
In total, apartments, including: one-room two-room three-room four-room and more					

4. Technological, architectural and construction solutions for the facility are characterized by the following data:

_____ ;
 brief technical characteristics of the features of its location, main materials and structures, engineering and technical equipment

5. Equipment at the facility provided by the project is installed in the quantity that accords with its certificate of acceptance after individual testing and comprehensive testing;

6. External engineering communications (cold and hot water supply, sewerage, heat supply, gas supply, power supply and communications) ensure normal operation of the facility (building, structure, premises) and are accepted by city operating organizations;

7. Estimated cost for the approved project (design and estimate documentation):

in total _____ thousand tenge, including for construction and assembling operations _____ thousand tenge, equipment, tools and inventory _____ thousand tenge;

8. Estimated cost of fixed assets, accepted into operation is _____ thousand tenge, including:

cost of construction and assembly works _____ thousand tenge;

cost of equipment, tools and inventory _____ thousand tenge;

9. The facility is built in accordance with the approved project (design and estimate documentation) and the requirements of state regulatory documents on architecture, urban planning and construction.

ORDERED BY: _____

accept for operation.

name of the facility (complex)

Client _____

surname, name, patronymic (if any), senior officer signature, seal (hereinafter, L.S.)

Engineering supervision _____

surname, name, patronymic (if any), expert's signature L.S.

Designer supervision _____

surname, name, patronymic (if any), expert's signature L.S.

Contractor (general contractor) _____

surname, name, patronymic (if any), senior officer signature, L.S.

Technical characteristics of the facility (multi-apartment houses, industrial, commercial objects, etc.)

Description (multi-apartment house, industrial, commercial objects, etc.)	Unit of measurement	General information						
		number of floors (floor)	built-up area (m ²)	building volume (m ³)	total area (m ²)	Living space (m ²)	Non-domestic premises area (m ²)	parking space area (m ²)
I	2	3	4	5	6	7	8	9

Description of structural elements			Type of heating	Urban amenities				
foundation bed	walls	roofing		power supply	water supply	hot water supply	sewerage	gas supply
10	11	12	13	14	15	16	17	18

Client _____

surname, name, patronymic (if any), senior officer's signature, L.S. define L.S.

Designer supervision _____

surname, name, patronymic (if any), expert's officer signature, L.S.

Technical characteristics of the facility (power transmission lines)

No.	Description	Unit of measurement	Quantity
1	2	3	4
1	Low-voltage overhead power line? (OHPL) ...	kilometer (km)	
2	High voltage 10 kV OHPL ...	km	
3	Low-voltage cable PTL ... Define PTL	km	
4	High-voltage cable PTL ...	km	
5	Bearing area	m ²	
6	Bearings:		
	1) metal	pieces (pcs)	
	2) wooden with wooden auxiliary pieces	pcs	
	3) wooden with reinforced concrete auxiliary pieces	pcs	
	4) reinforced concrete	pcs	
	5) hanger cables	pcs	
7	Cables:		
	1) copper	km	
	2) aluminum	km	
	3) steel-aluminum	km	
8	Brackets for lighting fixtures:		
	1) reinforced concrete	pcs	
	2) metal	pcs	
9	Street illumination:		
	1) incandescent lamps	pcs	
	2) mercury lamps	pcs	
	3) luminescent lamps	pcs	
10	Cable:		
	1) brand... voltage...	km	
	2) brand... voltage...	km	

No.	Description	Unit of measurement	Quantity
11	Box coupling...	pcs	
12	End bell	pcs	
13	Earthing network	pcs	
14	Lightning protection system	pcs	
15	Cable network roadbed:		
	1) asphalt-concrete	m ²	
	2) cobble	m ²	
	3) pavements	m ²	

Client _____

surname, name, patronymic (if any), senior officer's signature, L.S.

Designer supervision _____

surname, name, patronymic (if any), expert's officer signature, L.S.

Technical characteristics of the facility (approach viaducts)

No.	Description	Unit of measurement	Quantity	Structural unit characteristics	Note
1	2	3	4	5	6
1	Viaduct length	m			
2	Laying depth	m			
3	Width	m			
4	Height	m			
5	Dimensions	m			
6	Materials				
7	Tray material				
8	Tray length	m			
9	Embankment height	m			
10	Distance between roadway level and pipe outer wall	m			

II	Number of pipes	pcs			
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Client _____

surname, name, patronymic (if any), senior officer's signature, L.S.

Designer supervision _____

surname, name, patronymic (if any), expert's officer signature, L.S.

Technical characteristics of the facility (networks, water lines, collectors, etc.)

No.	Description	Unit of measurement	Quantity, length	Note
I	2	3	4	5
Pipe network				
	Water supply system (total length)	m		
	1) steel pipes	m		
	2) cast-iron pipes	m		
	3) asbestos-cement pipes	m		
	4) reinforced concrete pipes	m		
	5) Other?	m		
2	Distribution network (total length)	m		
	1) steel pipes	m		
	2) cast-iron pipes	m		
	3) asbestos-cement pipes	m		
	4) polyethylene pipes	m		
	5) Other?	m		
3	inspection chamber	pcs		
4	Valves d-	pcs		
	« d-	pcs		
	« d-	pcs		
5	Faucets d-	pcs		
	« d-	pcs		
	« d-	pcs		

No.	Description	Unit of measurement	Quantity, length	Note
6	Tap d-	pcs		
	« d-	pcs		
	« d-	pcs		
7	Fire hydrant	pcs		
8	Water service pipe	pcs		
9	Drinking fountain	pcs		
Sewage				
1	Collectors (total length)	m		
	1) ceramic pipes	m		
	2) cast-iron pipes	m		
	3) concrete pipes	m		
	4) asbestos-cement pipes	m		
	5) reinforced concrete pipes	m		
	6) Other?	m		
	7) Other?	m		
2	Sewage network (total length)	m		
	1) ceramic pipes	m		
	2) cast-iron pipes	m		
	3) concrete pipes	m		
	4) asbestos-cement pipes	m		
	5) reinforced concrete pipes	m		
	6) Other?	m		
3	inspection chamber	pcs		
	Outlet	pcs		

Client _____

surname, name, patronymic (if any), senior officer's signature, L.S.

Designer supervision _____

surname, name, patronymic (if any), expert's officer signature, L.S.

Technical characteristics of the facility (communication line)

No.	Description	Unit of measurement	Quantity, length
1	2	3	4
1	Air communication lines, including:	km	
	1) brand	km	
	2) brand	km	
	3) brand	km	
2	Cable communication lines, including:	km	
	1) brand	km	
	2) brand	km	
	3) brand	km	
3	Support, including:	pcs	
	1) metal	pcs	
	2) wooden	pcs	
	3) anchoring support	pcs	
	4) reinforced concrete	pcs	
	5) hanger cable	pcs	
4	Pit network, including:	pcs	
	1) cable pit 1	pcs	
	2) cable pit 2	pcs	
	3) cable pit 3	pcs	
	4) cable pit 4	pcs	
	5) cable pit 5	pcs	
5	Box coupling	pcs	
6	Communication collectors, including:		
	1) ceramic	km	
	2) concrete	km	
	3) asbestos-cement	km	
	4) plastic	km	

No.	Description	Unit of measurement	Quantity, length
7	URS (unattended repeater station)	pcs	

Client _____

surname, name, patronymic (if any), senior officer's signature, L.S.

Designer supervision _____

surname, name, patronymic (if any), expert's officer signature, L.S.

ANNEX TO CHAPTER II

APPLICATION No. 23

LIST OF OPERATIONAL DOCUMENTATION FOR DUTY PERSONNEL

Duty personnel	Document						
Manager of the national dispatch center of the system operator Manager of regional dispatch center	Operational executive scheme (layout scheme)	Operations journal	Log or card file of requests for withdrawal from operation of the equipment that is under the management and control of the dispatcher	Journal of relay protection, automation and telemechanics	Maps of relay protection and automation installations	Order journal	
Power plant shift supervisor	Daily operational executive scheme or layout scheme	As above	A log or card index of applications to the manager on a conclusion on the operation of equipment under the supervision of the manager	Journal of applications to the chief engineer for the withdrawal of equipment not under the control of the dispatcher	Order journal		
The shift supervisor of the electrical department	As above	As above	Journal of relay protection, automation and telemechanics	Journal of relay protection, automation and telemechanics	As above	Journal of accounting work on duties and orders	A log or card index of the defects and hardware problems
The supervisor of the thermal department	Operational executive scheme of the main pipelines	As above	Order journal	Journal of accounting work on duties and orders	A log or card index of defects and hardware problems		
The shift supervisor of the thermal automatics department	Operational journal	Journal of technical protection and automation and journal of technical means of automatic control	Map of technical protection and alarm systems and map of tasks for auto-regulators	Order journal	Journal of accounting work on duties and orders	A log or card index of defects and hardware problems	

Duty personnel	Document						
		system					
The shift supervisor of the chemical department	Operational executive scheme of chemical water treatment	Operational journal	Order journal	Journal of accounting work on duties and orders	A log or card index of defects and hardware problems		
Power grid manager	Daily operational executive scheme or layout scheme	Operational journal	Journal or card file of applications for withdrawal from the operation of equipment under the control and management of the power system manager	Journal of relay protection, automation and telemechanics	Maps of relay protection and automation installations	Order journal	
The duty of the substation with a permanent duty manager, the regional power supply network	Daily operational executive scheme or layout scheme	As above	Log of requests for withdrawal from equipment operation	As above	As above	As above	A log or card index of defects and hardware problems
Heat network manager	Operational executive scheme of the pipelines	As above	As above	Temperature and piezometric graphs of networks	Order journal	A log or card index of defects and hardware problems	
The duty engineer of a district heating network	Daily operational executive scheme	As above	As above			As above	Journal of accounting work on duties and orders

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