Information for Investors

on Renewable Energy Auctions in Kazakhstan
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1. Introduction

1.1 Introduction

In May 2018, Kazakhstan plans to hold the first international auction for the selection of renewable energy projects.

Being one of the stages of the renewable energy sources orderly development, auctions are aimed at selecting the most effective projects and forming of competitive market prices for electricity produced by renewable energy facilities.

According to the Auction schedule approved by the authorized body, it is planned to hold auctions for 1,000 MW of installed capacity this year.

The auction system supporting the development of RES in Kazakhstan has the following objectives:
1. to achieve the RES development targets;
2. to reduce the influence of the RES sector on the growth of the tariffs for the end users (economic factor);
3. to ensure the orderly development of the RES sector taking into account the capabilities of the unified power system of the Republic of Kazakhstan (technical factor);
4. to ensure a transparent procedure for the selection of renewable energy projects.

1.2 Background

The main document that defines clear guidelines for building a stable and efficient economy model based on the country's transition to a "green" development pathway is the Concept for the transition of the Republic of Kazakhstan to the "green economy", approved by the Decree of the President of the Republic of Kazakhstan dated May 30, 2013 No. 577.

The Concept for the transition of the Republic of Kazakhstan to the "green economy" defines the renewable energy sector development targets:
- 3% share of renewable energy in total electricity production by 2020;
- 10% share of renewable energy in total electricity production by 2030;
- 50% share of low-carbon alternative and renewable energy sources.

At the end of 2017 there were 50 operating renewable energy facilities in Kazakhstan with a total installed capacity of 340 MW, including WPP -110 MW, SPP - 60 MW, and HPP - 170 MW.

The Order of the Minister of Energy of the Republic of Kazakhstan dated November 7, 2016 No. 478 sets the renewable energy sector development targets:

**The renewable energy sector development targets:**

<table>
<thead>
<tr>
<th>No.</th>
<th>Indicator Name</th>
<th>Target</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>The share of electricity produced by renewable energy facilities in the total volume of electricity production by 2020</td>
<td>3%</td>
</tr>
<tr>
<td>2</td>
<td>The total installed capacity of renewable energy facilities by 2020, including:</td>
<td>1700 MW</td>
</tr>
<tr>
<td>1)</td>
<td>Wind power plants</td>
<td>933 MW</td>
</tr>
<tr>
<td>2)</td>
<td>Solar power plants, using PV solar energy converters</td>
<td>467 MW</td>
</tr>
<tr>
<td>3)</td>
<td>Hydro power plants</td>
<td>290 MW</td>
</tr>
<tr>
<td>4)</td>
<td>Biogas power plants</td>
<td>10 MW</td>
</tr>
</tbody>
</table>

**1.3 Preferences**

In order to attract investment, the current renewable energy sector laws of the Republic of Kazakhstan ensure the following:

1. guaranteed purchase from auction winners at auction prices for the period of 15 years after signing the power purchase agreement with the financial settlement center.

The auction winner and the auction price for each project are determined during the auction, conducted in electronic format on a special independent electronic trading platform.

2. annual indexation of auction prices with the following options:
   - to the level of the consumer price index;
   - mixed - 30% for the change of the national currency exchange rate against convertible currencies and 70% for the consumer price index;

3. exemption from payment for the electricity transmission services of grid operators;

4. priority dispatch of electricity produced using RES;
5. financial settlement of imbalances due to RES.

1.4 The Auction schedule


The Auction schedule is published on the official website of the authorized body - the Ministry of Energy of the RK (http://energo.gov.kz/).

This document presents a short schedule of auctions for the selection of renewable energy projects in the RK in 2018.

Based on the approved schedule the total capacity to be auctioned in 2018 will be 1,000 MW, including:
- solar power plants – 290 MW;
- wind power plants – 620 MW;
- hydro power plants – 75 MW;
- biogas power plants - 15 MW.

The schedule provides for separate auctions for the selection of small and large renewable energy projects.

The participants of the auctions for the selection of renewable energy projects should take into account that 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 the installed capacity above 10 MW will be eligible for large projects auctions, at the same time the maximum capacity of a project shall not exceed the auctioned installed capacity specified in the auction schedule.

The Auction schedule is based on the zones of the unified power system (hereinafter – the UPS) of the Republic of Kazakhstan.

The RK UPS zone is a part of the UPS of the Republic of Kazakhstan, with the scheme and regime different from the rest of the Kazakhstan UPS. The UPS of the Republic of Kazakhstan consists of three zones: the Northern Zone (Akmola, Aktyubinsk, East Kazakhstan, Karaganda, Kostanay, Pavlodar, North-Kazakhstan regions); the Southern zone (Almaty, Zhambyl, Kyzylorda, South-Kazakhstan regions); the Western zone (Atyrau, Western Kazakhstan, Mangystau regions).
### The spring auctions schedule

<table>
<thead>
<tr>
<th>No.</th>
<th>RES type</th>
<th>Auctioned installed capacity, MW</th>
<th>UPS zone</th>
<th>Auction time</th>
<th>Auction date</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Small</td>
<td>Large</td>
<td>Northern zone</td>
<td>14.00-17.00</td>
</tr>
<tr>
<td>1</td>
<td>WPP</td>
<td>20</td>
<td>50</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>WPP</td>
<td>50</td>
<td>Northern zone</td>
<td>14.00-17.00</td>
<td>May 24, 2018</td>
</tr>
<tr>
<td>3</td>
<td>SPP</td>
<td>10</td>
<td>Northern and Western zones</td>
<td>14.00-17.00</td>
<td>May 28, 2018</td>
</tr>
<tr>
<td>4</td>
<td>WPP</td>
<td>10</td>
<td>Western zone</td>
<td>14.00-17.00</td>
<td>May 29, 2018</td>
</tr>
<tr>
<td>5</td>
<td>WPP</td>
<td>50</td>
<td>Western zone</td>
<td>14.00-17.00</td>
<td>May 30, 2018</td>
</tr>
<tr>
<td>6</td>
<td>HPP</td>
<td>20</td>
<td>Northern and Southern zones</td>
<td>14.00-17.00</td>
<td>May 31, 2018</td>
</tr>
<tr>
<td>7</td>
<td>BioPP</td>
<td>5</td>
<td>All zones</td>
<td>14.00-17.00</td>
<td>Jun 4, 2018</td>
</tr>
<tr>
<td>8</td>
<td>WPP</td>
<td>10</td>
<td>Southern zone</td>
<td>14.00-17.00</td>
<td>Jun 5, 2018</td>
</tr>
<tr>
<td>9</td>
<td>SPP</td>
<td>20</td>
<td>Southern zone</td>
<td>14.00-17.00</td>
<td>Jun 6, 2018</td>
</tr>
<tr>
<td>10</td>
<td>SPP</td>
<td>50</td>
<td>Southern zone</td>
<td>14.00-17.00</td>
<td>Jun 7, 2018</td>
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</table>

### The fall auctions schedule

<table>
<thead>
<tr>
<th>No.</th>
<th>RES type</th>
<th>Auctioned installed capacity, MW</th>
<th>UPS zone</th>
<th>Auction time</th>
<th>Auction date</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Small</td>
<td>Large</td>
<td>Northern zone</td>
<td>14.00-17.00</td>
</tr>
<tr>
<td>1</td>
<td>WPP</td>
<td>50</td>
<td>Northern zone</td>
<td>14.00-17.00</td>
<td>Oct 4, 2018</td>
</tr>
<tr>
<td>2</td>
<td>WPP</td>
<td>250</td>
<td>Northern zone</td>
<td>14.00-17.00</td>
<td>Oct 8, 2018</td>
</tr>
<tr>
<td>3</td>
<td>SPP</td>
<td>30</td>
<td>Western zone</td>
<td>14.00-17.00</td>
<td>Oct 9, 2018</td>
</tr>
<tr>
<td>4</td>
<td>WPP</td>
<td>50</td>
<td>Western zone</td>
<td>14.00-17.00</td>
<td>Oct 10, 2018</td>
</tr>
<tr>
<td>5</td>
<td>HPP</td>
<td>55</td>
<td>Northern and Southern zones</td>
<td>14.00-17.00</td>
<td>Oct 11, 2018</td>
</tr>
<tr>
<td>6</td>
<td>BioPP</td>
<td>10</td>
<td>All zones</td>
<td>14.00-17.00</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Southern zone</td>
<td>14.00-17.00</td>
<td>Oct 15, 2018</td>
</tr>
<tr>
<td>----</td>
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</tr>
<tr>
<td>7</td>
<td>WPP</td>
<td>30</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>WPP</td>
<td>100</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>SPP</td>
<td>30</td>
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<td></td>
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</tr>
<tr>
<td>10</td>
<td>SPP</td>
<td>150</td>
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<tr>
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<td></td>
<td></td>
<td><strong>755</strong></td>
<td></td>
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</tr>
</tbody>
</table>
2. Terms and definitions

This document uses the following terms and definitions:

1) auction price – the price at which the financial settlement center purchases the electric energy produced by the renewable energy facilities, which is determined by the results of auction and does not exceed the corresponding ceiling auction price;

2) auction – process, organized and conducted by the organizer of auction in electronic system on the basis of auction and which is aimed at the selection of projects for the construction of the new renewable energy facilities and determining the auction prices of electric energy produced by the renewable energy facilities, taking into account the renewable energy facilities siting plan;

3) register of auction winners – a document compiled by the Organizer at the end of the auction and confirming the results the auction;

4) auction participant (hereinafter – the Participant) – applicant, which has been registered with the Organizer and received the status of the Participant;

5) organizer of the auction (hereinafter – the Organizer) – a legal entity, determined by the authorized body, which organizes and conducts auction according to the procedure provided in the Law;

6) bank guarantee – written document issued in accordance with the Rules for the issue of bank guarantees and sureties by the second level banks approved by Resolution of the Board of the National Bank of the Republic of Kazakhstan as of January 28th 2017 No. 21 (registered in the State register of regulatory legal acts No. 14915), which is issued by the bank to the 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;

7) beneficiary – a person to whom payment and/or transfer is made;

8) unilateral auction – a form of auction organization aimed to determine winners by successive selection of auction Participants bids from the ranked schedule of auction Participants.

9) renewable energy sources (hereinafter - RES) - are energy sources continuously renewed due to naturally occurring natural processes, which include the following types: solar energy, wind energy, hydrodynamic energy of water; geothermal energy: heat of soil, groundwater, rivers, reservoirs, as well as anthropogenic sources of primary energy resources: biomass, biogas and other fuels from organic waste used for the production of electrical and / or thermal energy;

10) financial settlement center for the support of renewable energy sources (hereinafter – the financial settlement center) – a legal entity created by the system operator and determined by the authorized body that carries out the centralized purchase and sale of electric power produced by the renewable energy facilities and delivered to the electric grids of the unified power system of the Republic of Kazakhstan according to the procedure set forth in the Law;

11) a renewable energy facility (RE facility) – technical devices intended for production of electric and/or thermal energy using RES and associated structures and
infrastructure which are technologically necessary for the operation of renewable energy facility and are on the books of the renewable energy facility owner;

12) applicant – a legal entity planning to participate in the auction;

13) standby letter of credit - bank's obligation to pay the beneficiary of the letter of credit a certain amount on the occurrence of the event (failure of the debtor to fulfill his/her obligations to the beneficiary). The standby letter of credit is issued through the SWIFT system;

14) ranked schedule – the list of bids of the auction Participants arranged in the ascending order of bid prices;

15) power purchase agreement (PPA) – the contract for the purchase of electricity from an energy producing organization, which uses RES, at auction prices signed between the financial settlement center and the energy producing organization which uses RES;

16) trading system – a complex of organizational, technical and software components that enable auction via the Internet;

17) 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;

18) authorized body – central executive body that provides management and intersectoral coordination in the field of support of the use of renewable energy sources (Ministry of Energy of the RK);

19) ceiling auction price – the maximum value of the auction price for electric energy;

20) grid connection point – the place where the renewable energy facility of the energy producing organization physically connects with the electric grid of the energy transmission organization.

21) tariff for the support of renewable energy sources - the tariff at which the financial settlement center for the support of renewable energy sources sells the electric energy produced by renewable energy facilities, established by the financial settlement center for the support of renewable energy sources in accordance with the Rules for determining the tariff for the support of renewable energy sources approved by the authorized body;

22) reserve fund – a fund established by the financial settlement center for the support of renewable energy sources, the money of which is stored on a special bank account and is used exclusively to cover the financial settlement center cash deficiencies and debts to energy producing organizations using RES, that occur due to failure to pay or untimely payment by conditional consumers for the delivered electric energy produced by the RE facilities.
3. **Preparation for participation in auctions**

3.1 **Land plots and connection points:**

The Ministry of Energy of the Republic of Kazakhstan prepares the auction schedule for the calendar year and publishes it on its Internet resource at least 3 (three) months prior to the expected auction date. The information specified in the Schedule is not subject to adjustment.

The schedule contains information on land plots to be allocated for the construction of renewable energy facilities and points of connection to the electrical grids of energy transmission organizations, indicating the maximum permissible capacity and the number of possible connections.

In accordance with the subparagraph 3-1) of Article 7 of the Law on the support of RES, the local executive bodies of regions, cities of republican importance and the capital reserve land plots for renewable energy facilities planned for construction until the auction winners are granted the land title, in accordance with the Land Code of the Republic of Kazakhstan dated June 20, 2003 and send the relevant information to the Ministry of Energy of the RK.

Points of connection to the electric grid, proposed by energy transmission organizations to the Ministry of Energy of the RK, are reserved for renewable energy facilities planned for construction until the auction winner concludes an agreement on connection of renewable energy facilities and (or) until the technical specifications for connection to the electric grid are issued and the relevant information shall be sent to the Ministry of Energy of the RK.

3.2 **Qualification requirements**

To participate in the auction, participants shall confirm that they meet the qualification requirements for legal capacity and solvency by providing the following documents:

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 representative (if the Participant is represented by someone other than the CEO);
5) details of the legal entity (bank details, address, contact numbers, e-mail);
6) document confirming the submission of the financial guarantee for participation in the auction.

Foreign legal entities shall provide similar documents in accordance with the legislation of the country in which they are registered and must attach notarized translations of each document into the state and Russian languages.
Financial guarantee for participation in the auction in the form of a bank guarantee or a standby letter of credit shall be issued for the benefit of the financial settlement center.

4. Financial guarantee

In order to ensure the fulfillment of the obligations undertaken by the participants, as well as the obligations of the auction winners the abovementioned persons shall provide a financial guarantee.

The financial guarantee shall be free from claims of third parties, as well as from other obligations of the participant and (or) the winner of the auction.

The amount claimed under the financial guarantee or a standby letter of credit is credited to the special account of the financial settlement center reserve fund.

The financial guarantee for participation in the auction.

The financial guarantee for participation in the auction is provided by the applicants to the financial settlement center as a guarantee that in case of winning the auction they will sign the PPA with the financial settlement center and submit the PPA performance bond on the terms and within the timeframes provided for in the Rules of organization and holding of auctions.

1. The financial guarantee for participation in the auction shall be issued in favor of the financial settlement center and shall be submitted to it not later than 2 (two) working days prior to the date of the auction.

The financial settlement center shall send the Organizer a list of applicants, who have financial guarantees, with indication of amounts 2 (two) hours before the start of the auction.

2. The applicant shall choose one of the following types of financial guarantee, issued with the SWIFT system:
   - a bank guarantee;
   - a standby letter of credit.

The amount of 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.

Financial guarantee deposited by the applicant in the form of a bank guarantee or a standby letter of credit is returned within 3 (three) working days from the date of submission of a written request sent by a Participant to the financial settlement center in one of the following cases:

1) the Participant did not win the auction in accordance with the results of the auction;

2) the auction winner signed the PPA.
If the winner of the auction has evaded the conclusion of the PPA, the financial settlement center shall issue a claim for payment under the relevant bank guarantee or a standby letter of credit.

Financial guarantee shall be valid for at least 90 (ninety) calendar days from the date of the auction and is irrevocable.

The financial guarantee is executed by the bank when the following documents are submitted by the financial settlement center:

- statement of failure to fulfill obligations by the debtor issued on paper, signed by the authorized person of the financial settlement center and certified by the seal of the financial settlement center;
- the demand for payment indicating the amount to be paid in accordance with these 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:

1) from the resident banks of the Republic of Kazakhstan with the 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;

2) from non-resident banks in the Republic of Kazakhstan with the long-term credit rating in foreign currency not lower than "BBB" by Standard & Poor's, "BBB" by Fitch, "Baa2" according to Moody's Investors Service.

At the same time, a bank guarantee or a standby letter of credit of non-resident banks of the Republic of Kazakhstan must be confirmed by resident banks, by issuing a counter-guarantee for non-residents obligations under subparagraph 1) of this paragraph.

**The PPA performance bond.**

The PPA performance bond is provided by the winners of the auction when applying for the conclusion of the PPA in accordance with 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 State register of regulatory legal acts under No 10662).

The applicant shall submit the PPA performance bond by one of the following ways:
1) a guaranteed cash contribution, which is paid to the special bank account of the financial settlement center in tenge;

2) a bank guarantee, issued in accordance with the Rules for the issue of bank guarantees and sureties by the second level banks approved by Resolution of the Board of the National Bank of the Republic of Kazakhstan as of January 28th 2017 No. 21 (registered in the State register of regulatory legal acts under No. 14915), or a standby letter of credit issued with the SWIFT system.

The Applicant provides the bank guarantee or the standby letter of credit:
- from the resident banks of the Republic of Kazakhstan with the 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;
- from non-resident banks in the Republic of Kazakhstan with the long-term credit rating in foreign currency not lower than "BBB" by Standard & Poor's, "BBB" by Fitch, "Baa2" according to Moody's Investors Service.

At the same time, a bank guarantee or a standby letter of credit of non-resident banks of the Republic of Kazakhstan must be confirmed by resident banks, by issuing a counter-guarantee for non-residents obligations under subparagraph 1) of this paragraph.

The amount of the PPA performance bond is 10,000 (ten thousand) KZT per 1 (one) kW of installed capacity multiplied by the installed capacity of the renewable energy facility indicated in the Register of auction winners.

The bank guarantee or the standby letter of credit shall be irrevocable and provide for the possibility to be 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 (twenty five) months;
- for wind and biogas power plants – for at least 37 (thirty seven) months;
- for hydro power plants – for at least 49 (forty nine) months.

The bank guarantee or the standby letter of credit is executed by the bank when the following documents are submitted by the financial settlement center:
- statement of failure to fulfill obligations by the debtor issued on paper, signed by the authorized person of the financial settlement center and certified by the seal of the financial settlement center;
- the demand for payment indicating the amount to be paid in accordance with the Power purchase agreement.
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 seller).

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

The PPA performance bond shall be retained in following cases:

1) failure to provide a copy of the notice on the beginning of the construction and installation of the RE facility which is the subject of the PPA to the state body responsible for national architectural and construction control within 12 months from the date of signing of the PPA - 30% of the PPA performance bond shall be retained;

2) failure to provide a copy of the operational acceptance certificate of the RE facility, which is subject of the PPA, approved in accordance with the architectural, urban planning and construction regulations of the Republic of Kazakhstan - 100% of the PPA performance bond shall be retained; and in case if the performance bond shall be partially executed according to subparagraph 1) of this paragraph – 70% of the PPA performance bond shall be retained within the following timeframe since the date of signing of the PPA:
   - for solar power plants – within 24 (twenty four) months;
   - for wind and biogas power plants – within 36 (thirty six) months;
   - for hydro power plants – within 48 (forty eight) months.

5. Connection to the grid

5.1 The procedure for connection of renewable energy facilities

To connect RE facilities to electric grids, the investor, after receiving a decision on the determination of the nearest point of the RE facility connection, submits an application in any format to the energy transmission organization for obtaining technical specifications and attaches the scheme of the RE facility connection to electrical grids.

The technical specifications for connection of renewable energy facility to electric grids are given by the energy transmission organization on the basis of the Scheme of power distribution of the power plant submitted by the investor, developed by a special design contractor and containing the scheme of connection of the RE facility to electric grids.

Unless the parameters of the connected facility will cause the increase of the threshold parameters of the electric grid, the power transmission organization develops the necessary technical specifications for connection of the RE facility.

The investor's application for technical specifications is reviewed by the energy transmission organization for no more than fifteen working days, unless the existing electric grid will have to be reinforced. In cases when the connection grid
reinforcements are required, the period for review of the application is not more than one month from the date of receipt of the application.

The technical specifications are issued by the energy transmission organization within three working days after the expiration of the deadline for review of the application for technical specifications.

If the RE facility with a load or power output from 0.1 to 10 MW is connected to the regional electric grid, the energy transmission organization shall notify the system operator within five calendar days from the date of receipt of the application and send a copy of the application for connection. When connecting the RE facility with a capacity exceeding 10 MW, the energy transmission organization sends the application to the system operator for approval.

The system operator approves the application within ten calendar days from the date of receipt of the application.

Based on the results of the application review, the energy transmission organization issues technical specifications for the RE facility connection to the electric or thermal grid, indicating the connection point determined by the energy transmission organization and the expected date of connection completion within fifteen working days from the date of receipt of the application.

The fee for the issue and re-issue of technical specifications is not charged.

After the technical specifications for connection are accepted by the investor they shall be valid for the term agreed by the parties but not less than the term required for pre-investment studies, design and construction of RE facilities as defined by the existing design and construction regulations and shall not exceed 3 years.

RE facilities shall be connected to the grids of the energy transmitting organization after commissioning of the facility on the basis of the received technical specifications.

5.2 The procedure for determining the nearest point of connection to electric grids and connecting RE facilities

To determine the nearest point of RE facility connection to electric grids, it is necessary to meet the conditions for transmission of the RE facility installed capacity while maintaining an economically feasible current density determined by the investor on the basis of a feasibility study.

An investor shall submit an application to determine the nearest point of RE facility connection to electric grids to the energy transmitting organization in any format with the following information regarding the RE facility:

1) name and type of the facility;
2) the preferred location of the site (a list of alternative aggregates sites with the indication of their tentative sites on a map);
3) permissible capacity transmission of the entire facility (maximum in megawatt, indicating Cos, and (or) in megawatts (hereinafter - MW), megavoltamperes;
4) expected output (MWh per month);
5) expected energy consumption of the auxiliary system, including reactive power;
6) design (configuration) of the facility;
7) nature of any disturbing load;
8) technology used by the proposed power plant;
9) expected commissioning date;
10) minimum active power generation in MW;
11) nominal megavoltamper, MW values, transient longitudinal reactance, short circuit ratio, inertia constant of the power plant with synchronous generators (motors);
12) nominal megavoltamper value for step-up transformer and positive sequence impedance (at max/min taps);
13) type and category of exciter.

According to the Rules for determining the nearest point of connection to electric grids, the energy transmission organization shall inform the investor in writing about the potential nearest electric grid connection points for consideration in the Scheme of power distribution of the power plant, developed by specialized licensed design contractors, no later than 15 calendar days after the receipt of the investor’s application.

5.3 Grid connection agreement
The energy transmission organization shall provide the energy producing organization with the access to the electric grid by providing a point of connection to the electric grid in accordance with the technical specifications for connection to the electric grid developed and issued in accordance with the Grid regulations, 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).

The energy producing organization undertakes to fully comply with the requirements of the technical specifications and ensure the timely commissioning of the RE facility before the technical specifications expire.

The energy producing organization shall:
1) fully comply with the requirements of the technical specifications within the deadlines established therein in accordance with the Grid connection agreement;

2) conclude the agreement for provision of services of technical dispatching of energy delivery to the grid and energy consumption with the system operator before the beginning of the comprehensive tests;

3) conclude the energy purchase and sale agreement with the buyer before the beginning of the comprehensive tests;

4) conclude the agreement for provision of energy transmission services with the energy transmission organization before the beginning of the comprehensive tests;

5) conduct comprehensive tests of the RE facility after fulfilling the requirements of the technical specifications in accordance with the Grid regulations.

The energy producing organization has the right to apply to the energy transmission organization for the extension of the validity period of the issued technical specifications, before the expiration of the technical specifications.

The energy transmission organization shall:

1) reserve the point of connection to the electric grid, specified in the technical specifications, for the energy producing organization before the technical specifications expire;

2) authorize the connection to the electric grid and the delivery of the RE facility's power when it fully meets the conditions of the Grid connection agreement within 30 (thirty) calendar days after the energy producing organization submits the application.

The Grid connection agreement enters into force from the moment of its signing and is valid until the end of the term of validity of the technical specifications or until the signing of the electric grid connection act, but not later than the deadline for the submission of the operational acceptance certificate for the new RE facility specified in the agreement on purchase of energy by the financial settlement center from the energy producing organization using RES, whichever comes first.

In case of the technical specifications prolongation in accordance with the terms of the Grid connection agreement, the parties shall draw up a corresponding supplementary agreement to the Grid connection agreement.

**Procedure for concluding a standard agreement on connecting the RE facilities**

The energy producing organization shall submit an application for the conclusion of an Agreement on the RE facilities connection prepared in any format to
the energy transmission organization within 30 (thirty) calendar days from the date of the inclusion of the facility in the RE facilities siting plan.

The application shall be accompanied by the following documents:
1) constituent documents of the energy producing organization;
2) technical specifications for connecting to the grid;
3) power distribution scheme of the power plant, developed in accordance with the Grid regulations 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);
4) copies of letters from the energy transmission organization and the System operator about the approval of the power distribution scheme of the power plant in accordance with the Grid regulations.

The energy transmission organization shall consider the application and the documents attached to it within 10 (ten) working days from the date of receipt. In case of non-compliance of the submitted documents with the Grid regulations requirements, it shall send a relevant notice to the energy producing organization indicating the missing documents within 2 (two) working days.

The energy producing organization shall submit such documents within 10 (ten) working days from the date of receipt of the notice from the energy transmission organization.

In accordance with the standard agreement on connecting the RE facilities, the energy producing and energy transmission organizations shall conclude an Agreement on the RE facility connection within 30 (thirty) calendar days from the date of submission of the full package of documents, provided for by the Grid regulations, by the energy producing organization.

5.4 Operational regulations

In case the network frequency deviates from the nominal value, the renewable energy generating stations (hereinafter - REGS) shall operate stably (without automatic disconnection from the grid) for the minimum time periods during which the generating unit must be able to operate without disconnection from the grid.

In case the network frequency deviates from the nominal value, the REGS 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 operation time periods can be negotiated with the System operator and described in the grid code, grid regulations, technical specifications for connection to the grid in order to optimize the use of the
technical capabilities of the REGS when it is necessary to maintain or restore the
reliability of the system.

The REGS should be able to automatically disconnect at a certain frequency at
the request of the System operator. The conditions and stations for automatic
disconnection shall be agreed by the System operator in the technical specifications
for connection to the grid.

The REGS shall provide for a stable power output when the frequency goes
down until the thermal power plants are disconnected by the underfrequency
islanding system.

The REGS frequency ranges shall be clarified at the designing stage in order to
maintain the efficiency and effectiveness of the underfrequency islanding system.

The REGS shall be equipped with automatic systems to control the active power
generation, which allows WPPs to participate in the primary frequency control (in
case of frequency deviation in the grid, both below and above the nominal value). The
settings for the automatic systems for the active power generation control shall
be agreed upon with the System operator, the automatic systems shall be put into
operation upon the command of the System operator.

The REGS 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 WPP are defined based on
the "voltage-time" parameter indicated in Figure 1 below.

The REGS shall provide the black start capability. At the same time, it shall be
possible to synchronize the REGS 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 the table below.

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

The REGS shall be equipped with automatic systems that regulate the
generation of reactive power:
(a) in voltage control mode;

(b) in reactive power control mode;

(c) in power factor adjustment mode.

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

The REGS shall provide the reactive power control range within the limits
specified in Figure 2 below.
When the voltage at the connection point goes below (or above) the limits specified in Figure below, the REGS shall operate in the mode of maximum generation (or maximum consumption) of reactive power.

Requirements for the REGS measurement and control equipment:

1) The REGS shall be equipped with the appropriate equipment, which records 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, power quality;

2) 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.

3) dynamic system control equipment and power supply quality control equipment shall enable 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.

At the stage of approval of a REGS construction project, the System operator is presented with the REGS simulation model, as well as calculations performed in the simulation model that demonstrate the compliance of the REGS with the requirements of the electric power industry legislation of the Republic of Kazakhstan.

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

**Minimum time periods during which a generating unit shall be able to operate without disconnection from the grid.**

<table>
<thead>
<tr>
<th>Frequency range</th>
<th>Minimum operation time</th>
</tr>
</thead>
<tbody>
<tr>
<td>47,0 Hz - 49,0 Hz</td>
<td>120 min</td>
</tr>
<tr>
<td>49,0 Hz - 51,0 Hz</td>
<td>Unlimited</td>
</tr>
<tr>
<td>51,0 Hz - 51,5 Hz</td>
<td>90 min</td>
</tr>
</tbody>
</table>

Figure 1. WPP stable operation conditions are defined by the “voltage-time” parameter.
Area «A» - The REGS should remain connected to the grid and operate stably;
Area «B» - The REGS should remain connected to the grid and provide maximum voltage support by generating a controlled volume of reactive power;
Area «C» - The REGS is allowed to be disconnected from the grid.

Figure 2. The dependence of the SPP reactive power control range on its actual generation
Figure 3. The dependence of the SPP reactive power control range on the actual voltage at the connection point.

5.5 The procedure for commissioning of the Automated Commercial Energy Metering System for wholesale energy market entities (ACEMS)

Acceptance of the ACEMS for commercial operation (commissioning) is conducted in order to implement a unified technical policy on electric energy metering using the ACEMS of the entities and to integrate it into a single ACEMS of the wholesale market of the Republic of Kazakhstan, as well as to ensure the compliance of ACEMS of the entities with the requirements of the legislation of the Republic of Kazakhstan on electric power industry and the uniformity of measurements.

After the completion of the pilot tests, the entity shall send letters of invitation to the System operator and the related entities regarding the readiness of ACEMS for commissioning and regarding the participation in the work of the commissions on the analysis of the results of the pilot tests of the ACEMS and the decision on further operation of the system.

The acceptance of the ACEMS for commercial operation is carried out by a commission approved by the CEO or technical director of the entity, which includes the representatives of:

1) the grid operator, to the electrical grids of which the entities are technologically connected;
2) related wholesale energy market participants, having common balance inventory boundaries with the entity;
3) general contracting, contracting, design organization;
4) System operator.

The System operator and the related entities shall agree on the timeframes and send their representatives to participate in the work of the commission within ten working days.

The entities shall submit the following documents for consideration by the commission:

1) technical specifications for connection of ACEMS to the ACEMS of the System operator;
2) the terms of reference for designing of ACEMS, agreed by the System operator;
3) ACEMS design, agreed by the System operator;
4) ACEMS detailed design;
5) ACEMS operational documentation, including technical descriptions and operating instructions for data collection, transmission, storage and display devices, ACEMS user manual, ACEMS system administrator's manual;
6) copies of certificates on verification of the measuring instruments incorporated in the CEM in accordance with the requirements of the legislation of the Republic of Kazakhstan in the field of measurements uniformity;
7) CEM examination certificates;
8) copy of the license agreement for ACEMS system and application software;
9) copies of the regulatory and administrative documents related to the trial operation: ACEMS pilot tests programs, the ACEMS pilot tests act, pilot tests protocols of the ACEMS components.

When reviewing ACEMS documentation, the commission shall:

1) verify completeness of documents and compliance with the requirements of the Rules for automated commercial energy metering system for wholesale energy market entities;
2) assess the compliance of the ToR with the requirements of the Standard of the RK No. 34.015-2002 "Information technology: A set of standards for automated systems. Terms of Reference for the creation of an automated system", technical specifications for ACEMS creation;
3) assess the conformity of the ACEMS design with the requirements of the ToR for the ACEMS design;
4) assess the conformity of the detailed design documentation with the requirements of the ACEMS design;
5) assess the conformity of the documents (sections) of the operational documentation for the automated system with the requirements of the ToR and the design, including the evaluation of the "User manual" conformity with the

6) prepare the executive documentation after the implementation of the ACEMS design;

7) assess the conformity of the characteristics of the system and application software with the requirements of the ToR and the ACEMS design;

8) analyze the regulatory and administrative documents related to trial operation for compliance with the requirements of the Regulatory Document No. 50-34.698-90 "Regulation on standardization. Methodological guidelines. Information technology. A set of standards and regulations for automated systems. Automated systems. Requirements for the content of documents";

9) analyze the results of ACEMS pilot tests and trial operation.

The results of documents consideration by the commission shall be summarized in the minutes of the meeting of the commission.

If there are comments, the entities shall eliminate the shortcomings specified in the minutes and inform the System operator when they are ready for re-acceptance into commercial operation.

In the absence of any comments, the commission shall prepare an Act on acceptance of ACEMS into commercial operation.

The System operator shall register the Act in the register of automated commercial energy metering systems, which is maintained by the System operator.

The Act confirms the readiness of ACEMS to be used for both internal commercial settlements and wholesale market settlements.

The Act shall be made in two copies, one for the entity, the other copy for the Register.

After ACEMS is commissioned, the entities shall submit a letter to the System operator, confirming the operability of the system, once every five years, including the following documents:

1) a list of metering aggregates with identification codes and indication of energy metering status: "commercial" or "technical";

2) copies of certificates with valid verification dates for the measuring instruments incorporated in CEM;

3) copies of the acts of replacement of the measuring instruments incorporated in CEM;

4) copies of the acts of verification of data transmission from the aggregates to the central database of the System operator’s ACEMS;

5) a copy of the order on the appointment of responsible persons for operation and metrological support of ACEMS, their contact numbers and e-mail addresses.
The System operator together with the administrator of the integrated automated system shall verify documents, provided for by the Rules for automated commercial energy metering systems for wholesale energy market entities, within fifteen calendar days.

If there are comments, the entities shall eliminate the shortcomings and inform the System operator when they are ready for the second verification.

If the results of documents verification are positive, the System operator together with the administrator of the integrated automated system shall issue an ACEMS re-registration act and make appropriate changes to the Register.
6. Centralized purchase and sale of RES-based electricity

6.1 Centralized purchase of RES-based electricity

In accordance with paragraph 1 of Article 9 of the Law "On Support of the use of renewable energy sources", an energy producing organization using renewable energy sources has the right, at its discretion, to sell the produced electric energy through one of the following options:

1) to the financial settlement center at the feed-in tariff that is valid as of the date of concluding the purchase and sale agreement between the energy producing organization and the financial settlement center, or at the auction price determined based on the results of the auction, taking into account the indexation;

2) to consumers at contract prices in accordance with bilateral contracts concluded in accordance with the electric power industry laws of the Republic of Kazakhstan.

When participating in the auction for the selection of renewable energy projects, the auction winners conclude the power purchase agreement with the financial settlement center at the auction price determined in the course of the auction.

The date when the financial settlement center begins to purchase the electricity produced by the renewable energy facility is the date of the beginning of a comprehensive test of the electrical installations of the renewable energy facility of the Applicant, during which the electricity is delivered to the electric grids of the energy transmission organization.

The financial settlement center pays the applicant for the entire volume of the electricity produced and delivered to the electric grid of the energy transmission organization by the new renewable energy facility for 15 (fifteen) years from the date of the beginning of the comprehensive test of the electrical installations of the renewable energy facility in accordance with the terms of the concluded power purchase agreement.

6.2 The power purchase agreement (the PPA)

The procedure for conclusion of the power purchase agreement (the PPA)

The applicant, recognized as the winner of the auction, submits an Application for the conclusion of the PPA to the financial settlement center within 60 calendar days from the date he and his corresponding renewable energy project were included in the list of energy producing organizations using RES, published on the Internet.
The application for the conclusion of the PPA with the financial settlement center shall be accompanied by:

1) articles of incorporation;
2) the PPA performance bond as a guarantee that the applicant will fulfill his obligations under the PPA within the prescribed time limits;
3) a document confirming that the person is authorized to sign the PPA;
4) information regarding the planned volumes of electricity supply;
5) a copy of the written notification of the results of the auction.

The financial settlement center reviews the Application and the submitted documents within 10 (ten) working days from the date of the receipt thereof. If the Applicant did not submit the full package of documents the financial settlement center returns the Application specifying the reasons for the return within 5 (five) working days from the date of the receipt.

The Applicant supplements the Application with the missing documents and/or addresses the comments of the financial settlement center within 15 calendar days from the date the Application was returned.

The financial settlement center concludes the PPA with the Applicant when the following conditions are met:

1) the applicant submitted all required documents;
2) the renewable energy facility and the Applicant are included in the list based on the results of the auction;
3) there is no existing PPA between the financial settlement center and the Applicant for the purchase of the electricity produced by the renewable energy facility specified in the Application;
4) the applicant chooses the option for selling the produced electricity in accordance with paragraph 1 of Article 9 of the Law on the Support of the use of RES;
5) the applicant met the deadline for submitting the application for the conclusion of the PPA and submitted a full package of documents for conclusion of the PPA;
6) a bank guarantee or a standby letter of credit has been submitted in accordance with the requirements of the Rules for the centralized purchase.

The PPA is formalized in accordance with the standard PPA form approved by the Ministry of Energy of the RK in accordance with subparagraph 10) of Article 6 of the Law on the support of the use of RES. The PPA shall indicate the auction price for this particular Applicant in accordance with the register of the auction winners.

The auction price specified in the PPA is applicable from the date of the beginning of the comprehensive testing of the electrical installations of the power plant during which the electric energy was delivered to the electric grids of the
energy transmission organization for the next 15 (fifteen) years with annual indexation in accordance with the Rules for 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.

The financial settlement center sends two copies of the draft power purchase agreement to the Applicant to the address specified in the Application or hands them to the authorized representative of the Applicant at the premises of the financial settlement center within 10 (ten) working days from the date it receives the documents required for the conclusion of the PPA with the financial settlement center, stipulated by the Rules of organization and holding of auctions.

After signing the PPA the Applicant shall provide the financial settlement center with the following documents:

1) a copy of the notice on the beginning of the construction and installation of the RE facility which is the subject of the PPA to the state body responsible for national architectural and construction control - within 12 months from the date of signing of the PPA;

2) a copy of the operational acceptance certificate of the RE facility, which is 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;

3) 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 Applicant for the renewable energy facility for which the power purchase agreement 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;

4) 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 of the renewable energy facility, signed between the energy transmission organization and the Applicant for the renewable energy facility for which the power purchase 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;
5) at the request of the financial settlement center, the applicant sends information on the progress of the construction of the renewable energy facility.

In case the deadline for the provision of a copy of the operational acceptance certificate of the renewable energy facility is not met in accordance with the requirements of the Rules of the centralized purchase, the power purchase agreement ceases to be effective.

The power purchase agreement and the corresponding auction price cease to be effective 15 (fifteen) years after the date the purchase of electrical energy produced by the renewable energy facility begins in accordance with the power purchase agreement.

**The scope of the PPA**

In accordance with the PPA, the seller sells and the buyer 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 auction for this particular auction winner.

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.

The change of the auction price as a result of indexation or the change of the auction price indexation procedure is formalized by signing a supplementary agreement to the PPA specifying the date the relevant changes begin to apply which shall be determined in accordance with the Rules for determination of feed-in tariffs and ceiling auction prices.

**Metering of the volume and payment for the electricity**

Metering of the volume of delivered electricity is conducted on the basis of the indications of the Seller's commercial metering devices installed at the delivery point.

After the Buyer ensures that the ACEMS at his facility is operational, he has the right to use the 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 financial settlement of imbalances of electrical energy produced by renewable energy facilities, including the power plant, is carried out by the Buyer 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 dated February 20, 2015 No. 112 (registered in the Register of state registration of regulatory legal acts under No. 10532).
In disputable cases, the final document for mutual settlements between the Parties is the actual balance of electricity production/consumption in the wholesale electricity market of the Republic of Kazakhstan, provided by the National Dispatch Center of the System Operator.

The electric energy produced by the power plant 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 Buyer and is not taken into account 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 of which the power plant is connected.

The payment for the electricity is carried out by the Buyer within fifteen 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.

**The rights and obligations of the Parties**

The Seller is obliged to:

1) monthly provide the Buyer with the information on the actual daily output, electricity delivery 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 Buyer 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 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 20th of December, send information on projected volumes of generation, delivery to the electricity grids for the coming year, broken down by months;

6) in the event of termination of the Agreement on his own initiative, notify the Buyer 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 is operational before the commencement of the commercial operation of the power plant. 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;

10) in case of stage-by-stage commissioning of energy installations 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) if the installed capacity of the power plant is not less than one megawatt, comply with the operation modes of the generating installations of the plant set by the system operator in accordance with the legislation of the Republic of Kazakhstan

14) 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 in a form agreed with the financial settlement center - no later than on the seventh day of the month following the month of delivery;

15) provide the financial settlement center with a copy of the notice on the beginning of the construction and installation of the RE facility which is the subject of the PPA to the state body responsible for national architectural and construction control - within 12 months from the date of signing of the PPA;

16) provide the financial settlement center with a copy of the operational acceptance certificate of the RE facility, which is 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;
17) 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;

18) 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;

19) at the request of the financial settlement center, provide information on the progress of the construction of the renewable energy facility.

The Buyer is obliged 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 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 subparagraph 16) of paragraph 11 of the Agreement, return the PPA performance bond or its part within 10 working days from the date of submission of the written request.

The Seller has the right to:

1) demand the fulfillment of the terms of the Agreement by the Buyer;

2) to carry out ongoing repair or overhaul of the power plant, including the replacement of the main generating equipment, provided that the total installed
capacity of the generating equipment of the power plant specified in the Agreement will not be increased;

3) assign his existing and future rights and claims for the Buyer arising from the Agreement, with notification of the Buyer before the conclusion of the respective assignment of claim agreement;

4) fully assign his rights and obligations under the Agreement to a third party in the event of the alienation of the power plant to the same party. In this case, the rights and obligations under the Agreement pass on to the third party simultaneously with the power plant property rights.

The Buyer 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 Buyer paid an extra sum to the Seller;

3) demand the fulfillment of other Seller’s obligations in accordance with the Agreement and the legislation of the Republic of Kazakhstan in the field of renewable energy sources and electric power industry.

Liabilities of the Parties

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, 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 and notifies the Seller about that in written.

At the same time if part of the PPA performance bond is retained (30% of the PPA performance bond), 70% of the PPA performance bond is retained in the manner established by the Rules for the centralized purchase and sale of electric energy.

For the delay in payments provided for by the Agreement, the Buyer 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.

The Parties are liable for violation of obligations under this Agreement, in accordance with the legislation of the Republic of Kazakhstan and the terms of the Agreement.

The terms of the Agreement may be amended only by mutual agreement of the Parties and formalized in writing.
Force majeure
The Parties shall not be liable for failure to perform and (or) improper performance of the terms of the Agreement if it was the result of force majeure circumstances.

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.

The Buyer’s lack of sufficient amount of money for any reason is not a force majeure circumstance and does not relieve the Buyer from the liability for late payments.

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 calendar days from the onset of the force majeure circumstances, as well as confirming documents.

Dispute settlement
The disputes arising from the Agreement shall be settled in accordance with the legislation of the Republic of Kazakhstan.

The Parties shall try to settle the disputes regarding the Agreement by direct negotiations.

Each Party has the right to appeal to court to settle a dispute related to the conclusion, validity, execution, amendment, suspension and termination of the Agreement, as well as to settle other disputes regarding the Agreement.

All disputes related to the conclusion, validity, execution, amendment, suspension and termination of the Agreement or otherwise related to the Agreement, shall be heard by the court having jurisdiction over the Seller’s seat.

The validity period of the Agreement and the auction price
The Agreement enters into force on the date on which it is signed by both Parties.

The Agreement and the auction price indicated therein shall cease to be effective fifteen years after the date of the beginning of the comprehensive testing of the electrical installations of the power plant during which the generated electricity was delivered to the electric grids of the power transmission organization.

Final provisions
The Agreement ceases to be effective in following occasions:
1) the Seller doesn’t meet the deadline for commissioning of the renewable energy facility;
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 Contract.

6.3 The procedure for centralized sale by the financial settlement center of the electricity produced by renewable energy facilities to the conditional users

According to the requirements of the Law “On the support of the use of renewable energy sources”, the expenses for the support of the use of renewable energy sources are distributed by the financial settlement center among the conditional consumers of electricity proportionally to their shares of delivery to the grid.

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

The conditional consumers are obliged to annually sign agreements with the financial settlement center for the purchase of electric energy produced by energy producing organizations using renewable energy sources in accordance with the standard form and pay for electricity generated by RES no later than thirty calendar days after the end of the month it was delivered.

The financial settlement center 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 paragraph 4-1 of the Law "On the support of the use of renewable energy sources", the conditional consumer 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 cap 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 at the wholesale market of electric energy of the Republic of Kazakhstan, 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 financial settlement center among the conditional consumers of electricity proportionally to their shares of delivery to the grid.

6.4 Feed-in tariffs and auction prices indexation

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 the table:

<table>
<thead>
<tr>
<th>No.</th>
<th>RES technology used to generate electric energy</th>
<th>Tariff, tenge/kWh (net of VAT)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Wind power plants except for the FIT for the wind power plant project “Astana EXPO - 2017” with the capacity of 100 MW for wind energy conversion</td>
<td>22.68</td>
</tr>
<tr>
<td>2</td>
<td>PV converters of solar energy except for the FIT for solar power plant projects that us PV modules based on Kazakhstan silicon (Kaz PV) for solar energy conversion</td>
<td>34.61</td>
</tr>
<tr>
<td>3</td>
<td>Small hydro power plants</td>
<td>16.71</td>
</tr>
<tr>
<td>4</td>
<td>Biogas plants</td>
<td>32.23</td>
</tr>
</tbody>
</table>

In accordance with the provisions of the Rules for determining feed-in tariffs and 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 supplementary agreements to the concluded ones.

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

The ceiling auction prices for 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 with allowances made for inflation using the following formula:

\[ T_{t+1} = T_t \times CPI \]

where

- \( T_{t+1} \) is an indexed auction price, calculated by the above formula, rounded down to the nearest whole tiyn;
- \( T_t \) is an auction price, taking into account the previous indexation, if there was any;
- CPI is a consumer price index, accumulated for the twelve months preceding October 1 of the year of indexation, determined according to the data of the authorized body in the field of national statistics.

For the projects that have credit obligations in foreign currency, if the change in the exchange rate of the national currency against convertible currencies is higher
compared to the CPI, the auction prices are indexed once a year on October 1, with allowances made for the inflation and changes in the exchange rate of the national currency against convertible currencies, using the following formula:

\[ T_{t+1} = T_t \times (1 + 0.7 \times \left( \frac{\text{CPI}_t - 100\%}{100\%} \right) + 0.3 \times \frac{\text{USD}_{t+1} - \text{USD}_t}{\text{USD}_t}) \], where

- \( T_{t+1} \) is an indexed auction price, calculated by the above formula, rounded down to the nearest whole tiyn;
- \( T_t \) is an auction price, taking into account the previous indexation, if there was any;
- \( \text{CPI}_t \) is a consumer price index, accumulated for the twelve months preceding October 1 of the year of indexation, determined according to the data of the authorized body in the field of national statistics;
- \( \text{USD}_{t+1} \) 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;
- \( \text{USD}_t \) is an average exchange rate of KZT to USD for the twelve months preceding October 1 of the year of indexation, determined according to the data of the National Bank of the Republic of Kazakhstan.

When calculating the indexation of FITs and auction prices, the level of the CPI shall be determined according to the data of the authorized body in the field of national statistics.
7. Formation of the Reserve fund

In accordance with the Law of the Republic of Kazakhstan “On support of the use of renewable energy sources” dated July 4, 2009, No. 165-IV, the financial settlement center forms a Reserve fund to cover its cash deficiencies and debts to energy producing organizations using 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 financial settlement center forms the Reserve fund by 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 the national currency of the Republic of Kazakhstan.

The size of the Reserve fund is three percent of the annual expenses of the financial settlement center for electric energy purchase from RE facilities.

Each year by December 30, on the basis of information provided by the energy producing organizations using RE-sources and the Ministry of Energy, in accordance with the Rules for determining the tariff for the support of the use of renewable energy sources approved by the Order Minister of Energy of the Republic of Kazakhstan dated February 20, 2015 No. 118 (registered in the Register of state registration of regulatory legal acts under No. 10622), the financial settlement center carries out:

1) calculation of costs for purchase of electric energy produced from renewable energy sources by energy producing organizations using RES by zones of energy consumption for the forecast year;

2) calculation of costs for the formation of the reserve fund by zones of consumption for the forecast year using the following formula:

\[ RFC = C_{\text{fixed}} \times 3\% - R F C_{\text{exp}}, \text{ where} \]

RFC are the costs of Reserve fund formation for the forecast year, relating to the consumption zone Zi;

RFC_{exp} are the costs of Reserve fund formation at the beginning of the forecast year;

C_{\text{fixed}} are the annual costs of the FSC for the purchase of electric energy produced by RE facilities in the consumption zone Zi determined in accordance with the Rules for determining the tariff for the support of RES;
3% - the size of the Reserve fund i.e. the share of the annual expenses of the financial settlement center for electric energy purchase from RE facilities

Zi is a zone of consumption.

The costs of Reserve fund formation are taken into account by the financial settlement center in determining the tariff for the support of RES in accordance with the Rules for determining the tariff for the support of RES.

The costs of Reserve fund formation are subject to monthly adjustment depending on the change in the data used for calculation.

The money of the Reserve fund shall only be used by the financial settlement center to cover its cash deficiencies and debts to energy producing organizations using 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 financial settlement center shall determine the amount of the cash deficiency and use the money of the Reserve fund to cover this cash gap not later than fifteen working days after the end of the payment deadline established for the conditional consumers by the Law.

The money of the Reserve fund used by the financial settlement center to cover cash deficiencies are subject to reimbursement and crediting to a special bank account of the Reserve fund at the expense of funds received from the conditional consumers.

Formation of the Reserve fund of the “FSC for RES” LLP started in January 2017.
8. Preparation for auction

8.1 The Organizer of auctions

In accordance with the order of the Minister of Energy of the Republic of Kazakhstan dated August 7, 2017 No. 280, the organizer of auctions that performs organization and holding of auctions, is Kazakhstan Electricity and Capacity Market Operator JSC (hereinafter “KOREM” JSC)

The auctions for the selection of renewable energy projects will be conducted on the electronic trading platform of “KOREM” JSC (http://www.korem.kz/).

The auctions for the selection of renewable energy projects are conducted in accordance with 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, approved by the order of the Minister of Energy of the Republic of Kazakhstan dated December 21, 2017 No. 466.

8.2 Registration of the applicant in the Trading System of the Organizer of the auctions and obtaining the status of the Auction Participant

To participate in the auction for the selection of renewable energy projects and receive the status of the auction participant, the applicant must register in the Organizer's trading system and conclude the Agreement for the provision of services for the organization and holding of auctions.

The Organizer receives the documents and registers the auction applicants within the time specified in the Auction schedule for 2018, approved by an order approved by the Ministry of Energy of the Republic of Kazakhstan dated February 22, 2018 No. 65.

To be registered in the trading system database the applicant needs to:

✓ apply for online registration to the official Internet resource of the Organizer (http://vie-trade.korem.kz/ru/user/login);
✓ provide the Organizer of the auctions with the electronic form of the following documents during online registration in accordance with the requirements of the Rules of organization and holding of auctions:

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 representative (if the Participant is represented by someone other than the CEO);
5) details of the legal entity (bank details, address, contact numbers, e-mail);
Foreign legal entities shall provide similar documents in accordance with the legislation of the country in which they are registered and must attach notarized translations of each document into the state and Russian languages.

If it is necessary to make changes to the package of submitted documents, the applicant must notify the Organizer in writing of the necessary changes, indicating the list of the changes.

After the applicant registers online, the Organizer verifies the submitted package of documents for compliance with the requirements and approves it within 2 (two) working days.

After the applicant provides the documents, the Organizer shall approve the assigning of the Participant status to the applicant and assign an identifier and a password to the Participant, enabling access to the trading system, within 2 (two) working days.

The Participant shall timely notify the Organizer about changes in the company details, in the list of Participant's employees who have access to the trading system.

The password granting the right of access to the trading system must not be shared with third parties.

8.3 The procedure for signing the agreement with the Organizer of the auctions
In the event that all the submitted documents comply with the established requirements in accordance with the Rules for the organization and holding of auctions, the Organizer confirms the registration of the applicant and sends to his e-mail specified during registration the following:

- Draft Agreement for the provision of services for the organization and holding of auctions for the selection of projects for the construction of new renewable energy facilities for signing;
- The invoice for the Service for the organization and holding of auctions for the selection of projects for the construction of new renewable energy facilities.

The applicant shall review the draft Agreement and send the signed Agreement to the Organizer by fax or e-mail no later than 3 (three) working days before the
auction date, in which he plans to participate and the original copy of the Agreement in duplicate by mail, and shall pay for the Service of the Organizer not later than 18:00 Astana time 2 (two) working days before the auction date.

After receiving the signed agreement and payment for the service, the Organizer confirms the applicant's assignment of the participant's status, and sends him the respective notification by e-mail, followed by granting him the access to the trading system.

8.4 Payment for the services of the Organizer of the auctions

Tariffs for the services of the Organizer are established in accordance with the legislation of the Republic of Kazakhstan and paid on the basis of the agreement signed between the applicant and the organizer.

The services for the organization and holding of the auctions are reimbursable and are paid on the basis of the Agreement for the provision of the service for organization and holding of the auctions. The cost of the service is 399,895 tenge.

The Agreement contains:

a. The subject matter of the Agreement, types of the services provided by the Organizer, deadlines and payment procedure;
b. criteria and requirements for the applicant to be admitted to participate in the auctions;
c. the auction methods;
d. liabilities of the parties for violation of the terms of the Agreement

In order to organize and hold auctions, the Organizer:

1) ensures the operability of the auctions trading system;
2) develops and approves methodology guidelines and regulations for the auctions;
3) provides equal access to the auctions for the Participants;
4) trains the staff of the Participants on working with the trading system;
5) interacts with the authorized body and the financial settlement center on issues related to the organization and holding of auctions;
6) publishes the Register of the auction winners on the official Internet resource

Within the framework of one Agreement for the provision of the service for organization and holding of the auctions the applicant may participate in several auctions, at the same time the Service shall be paid separately for each auction.

The Applicant shall pay for the Service to the Organizer not later than 18:00 Astana time 2 (two) working days before the auction date.
The Organizer shall send the Applicant the invoice, the service delivery certificate and the payment reconciliation report within 3 (three) working days after the actual auction date.

In the event that the auction was declared invalid, the Organizer returns 100% of the cost of the Service for organization and holding of auctions within 10 (ten) working days. To receive the refund for the cost of the Service for organization and holding of auctions, the applicant shall apply to the Organizer in writing, indicating the applicant’s bank details for the refund.

The payment for the Service for organization and holding of auctions is not returned to the applicant if he did not provide the financial guarantee for participation in the auction and was not admitted to participate in the auction.

8.5 Training for the auction participants on working with the information components of the Trading system of the Organizer

Training on working with the trading system is carried out by the Organizer face-to-face or remotely.

It is possible to self-study the training materials published on the Organizer’s Internet resource.

In order to receive face-to-face or remote training on working with the trading system, the applicant needs:

1) to register on the official Internet resource of the Organizer;
2) to sign the Agreement;
3) to pay for the Service.

The training stops 5 (five) working days before the date of the auction.

The training schedule is published on the official Internet resource of the Organizer.
9. The holding of auctions

9.1 Trading day

A trading session is conducted within the timeframe approved by the authorized body according to the Schedule and lasts three (3) hours. The time of auctions is from 14-00 to 17-00 Astana time.

Before the opening of the trading session, the Organizer shall:

1) enter the information on the auctioned installed capacity and the ceiling auction price into the trading system as well as any other information according to the Schedule approved by the Ministry of Energy of the RK;

2) enter the information received from the Ministry of Energy of the RK into the trading system regarding the availability of reserved land plots for renewable energy facilities planned for construction and the possibility of connecting to the electric grids of energy transmission organizations, specifying the maximum permissible capacity for electric grid connection points and the number of possible connections;

3) enter the information about the amounts of financial guarantees of the participants, received from financial settlement center, into the trading system.

The trading session procedure goes as follows:

1) The Organizer opens the trading session;

2) The Participants submit their bids through the trading system;

3) The Organizer closes the trading session;

4) The results of the auction are summed up, including determination of the auction prices;

5) The Organizer compiles the register of auction winners and publishes it on its Internet resource.

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

1) general information about the auction, specified in the Auction schedule approved by the Ministry of Energy of the RK;

2) the bid submitted by the Participant with all its parameters (price, time of submission);

3) the lowest price indicated in the submitted bids (without specifying the volumes).

Bids are accepted from the participants from the moment of opening of the trading session.

Only those participants that participate in the trading session in accordance with the Agreement shall have access to the trading session.

9.2 The contents of the bid and specific aspects of its submission

Participant’s bid shall contain the following basic information:

1) the name of the Participant;
2) 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) non-zero digits after the separating character;

3) the volume of installed capacity, which shall be at least 100 kilowatts, be multiple of 1 (one) kW and shall be indicated in megawatts (MW);

4) the minimum permissible volume of installed capacity, which shall be at least 100 kilowatts, be multiple of 1 (one) kW and shall be indicated in megawatts (MW);

5) the land plot planned to be used for the construction of the renewable energy facility and the electric grid connection point;

6) the type and the amount of the financial guarantee.

The Participants who have a land plot and (or) a point of connection to the electric grid, in accordance with the issued technical specifications for connection to the electric grid, shall indicate the respective data in the bid.

Participants submit their bids to the trading system throughout the trading session, and the prices indicated in the bids must not exceed the value of the corresponding ceiling auction prices.

Bids submitted by the Participants during the trading session with prices that coincide with the bid prices of other Participants submitted to the trading system, are rejected.

The Participants are prohibited from submitting bids that indicate the volume exceeding:

1) the volume of the installed capacity auctioned by the authorized body;

2) the maximum permissible capacity for electric grids connection points;

3) the amount of the financial guarantee.

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

Participants’ bids submitted to the trading system must not be removed.

Until the deadline for the submission of the bids expires, the Participants can change previously submitted bids at their own discretion by submitting a new bid. However, the new bid must not indicate a price higher than the one in the previous bid and the volume indicated in the previous bid shall remain the same.

The date and time of submission of the bids to the trading system shall be recorded by the Organizer within the accuracy of milliseconds.

Submission of a bid to the trading system by the participant is a necessary and a sufficient evidence that the participant agrees to conclude the PPA with the financial and settlement center at the price specified in the bid.
The bids submitted using the Internet 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.

9.3 Pricing method used in calculation of the auction prices

Auctions are held in the form of a unilateral auction.

The Organizer calculates prices when the following conditions are:

1) the total volume of installed capacity declared in the submitted bids for sale amounts to more than 150% of the installed capacity demand volume;

2) the number of participants who submitted their bids for sale to the trading system is at least three.

If the abovementioned conditions are not met, the Organizer does not calculate the prices and invalidates the auction.

Based on the bids the Organizer forms a ranked schedule arranged in the ascending order of prices specified in the bids.

A preliminary list of winners is determined after the deadline for the submission of bids to the trading system expires by successive selection of winners from the ranked schedule arranged from the lowest to the highest declared price until the demand is fully covered.

If in the preliminary list of winners there are several preliminary satisfied bids which indicate the same point of connection, the technical specifications of which can not be met because the total volume of these bids exceeds the maximum permissible capacity at this connection point and/or the number of possible connections, then the bids are excluded from the preliminary list of winners in the descending order of prices, until the condition for the maximum permissible installed capacity and the number of possible connections for this connection point is met.

In the event that the last selected bid from the preliminary list of winners cannot be fully satisfied with the existing demand, then the following conditions will apply:

1) 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. At the same time, the installed capacity volume 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;

2) if the satisfied volume of the last selected bid is less than 50% of its declared volume, then such bid shall not be fully satisfied at the end of the auction. At the same time, the auctioned installed capacity volume will be decreased by the amount of the satisfied remaining volume of the last selected bid from the ranked schedule.

After checking the conditions specified in paragraphs 1 and 2, the Organizer determines the winner (s) of the auction and includes them in the register of auction
winners. At the same time the auction prices are determined based on the prices indicated in the submitted bids.

**The 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 three (Figure 1, 2). In this case, the transactions are impossible and the auction is declared invalid.

![Figure 1](image_url)
Example 2. The demand and supply graphs overlap. The number of participants who submitted bids for sale is less than three (Figure 3, 4). In this case, the transactions are impossible and the auction is declared invalid.
Example 3. The demand and supply graphs do not overlap. The total installed capacity volume of the bids for sale is less than 150% of the installed capacity demand volume (Figure 5). In this case, the transactions are impossible and the auction is declared invalid.
**Example 4.** The demand and supply graphs overlap. The total installed capacity volume of the bids for sale is less than 150% of the installed capacity demand volume (Figure 6). In this case, the transactions are impossible and the auction is declared invalid.

![Figure 6](image)

**Example 5.** The demand and supply graphs overlap. The number of participants who submitted bids for sale is at least three. The total installed capacity volume of the bids for sale is more than 150% of the installed capacity demand volume. The satisfied volume of the last selected bid is less than 50% of its declared volume (Figure 7).

In this case, the installed capacity volume to be selected will be reduced by the amount of the satisfied 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.
**Example 6.** The demand and supply graphs overlap. The number of participants who submitted bids for sale is at least three. The total installed capacity volume of the bids for sale is more than 150% 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 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.
Example 7. The demand and supply graphs overlap. The number of participants who submitted bids for sale is at least three. The total installed capacity volume of the bids for sale is more than 150% 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 can not 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 the descending order of prices, until the condition for the maximum permissible installed capacity for this connection point is met (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 9

The ceiling auction price

Price, KZT/kWh (net of VAT)

Participant 1

CP 1

Participant 2

CP 2

Participant 3

The volume of auctioned installed capacity

CP 1 – 30 MW

CP 2 – 70 MW

Volume. MW
Example 8. The demand and supply graphs overlap. The number of participants who submitted bids for sale is at least three. The total installed capacity volume of the bids for sale is more than 150% 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 the descending order of prices, 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 for sale (Figure 12).
Figure 11
Example 9. The demand and supply graphs overlap. The number of participants who submitted bids for sale is at least three. The total installed capacity volume of the bids for sale is more than 150% 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 the descending order of prices, until the condition for the maximum permissible installed capacity for this connection point is met (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 for sale (Figure 14).
Figure 13
Example 10. The demand and supply graphs overlap. The number of participants who submitted bids for sale is at least three. The total installed capacity volume of the bids for sale is more than 150% 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 can not 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 the descending order of prices, until the condition for the maximum permissible installed capacity for this connection point is met (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 15

The ceiling auction price

CP 1 - 120 MW/the number of connections - 2
9.4 Announcement of the auctions results

Based on the results of the auction, the Organizer sends to the Participants notifications about the results of the auction in electronic form within 1 (one) hour after the closing of the trading session. Written notifications are sent to the Participants not later than 18.00 Astana time on the next working day.

Based on the results of the auction, the Organizer sends to the Participants notifications about the results of the auction in electronic form within 1 (one) hour after the closing of the trading session. Written notifications are sent to the Participants not later than 6 pm Astana time on the next working day.

The Organizer shall write and send the authorized body a summary of the auction results with an explanation of the auction procedure and full information about all of the bids submitted to the trading system as well as the Register of auction winners not later than 1 (one) working day after the closing of the trading session.

10. Inclusion of auction winners in the RE facilities siting plan and the list of energy producing organizations using RES
The authorized body shall automatically include the winners of the auction in the RE facilities siting plan and in the list of energy producing organizations using RES within 5 (five) 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 power purchase agreement with the financial settlement center within 60 (sixty) calendar days after being included in the list of energy producing organizations using RES.

11. Suspension and cancellation of auctions.

Auctions can be suspended for up to 30 minutes, in the following events:
1) technical problems on the server equipment or failures in the electronic system leading to the inoperability of the trading system;
2) 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 about the reason for the suspension of the auction, specifying the time during which the auction process will be renewed.

Auctions can be canceled if the following circumstances occur:
1) elimination of technical problems will take longer than 30 minutes;
2) 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 of cancellation of the auction for the reasons specified above another auction is held.

Another auction is held on the next working day after the date of the cancelled auction.

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

12. Reservation of lands

The procedure for lands reservation

In accordance with subparagraph 3 -1) of Article 7 of the Law on the support of the use of RES, the local executive bodies of regions, cities of republican significance and the capital shall reserve land plots for construction of RE 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 Ministry of Energy of the RK.

The procedure for reservation of lands is determined by the Rules for land reservation approved by the Order of the Minister of National Economy of the RK dated February 28, 2015, No. 178.

State bodies shall notify the authorized bodies for land-related issues of regions, cities of republican significance and the capital, depending on the location of the land plots under consideration for further reservation within fifteen working days from the date of adoption or entry into force of the approved integrated schemes of urban planning of territories, master plans for settlements, the roads and railways passages schemes, documents of the state planning system of the Republic of Kazakhstan (hereinafter referred to as the Documents).

The authorized bodies for land-related issues of regions, cities of republican significance and the capital shall consider the Documents and if the reserved land plots are located within the populated areas, except for the cities of republican significance and the capital, they shall send the notification to the authorized bodies for land-related issues of regions, cities of regional significance within two working days from the date of the receipt of the notification.

The authorized bodies for land-related issues shall send a copy of the notification to the State corporation for obtaining land-cadastral information within two working days from the date of the receipt of the notification.

The State corporation shall submit the information on the reserved land plots, as well as their layout scheme from the database of the automated information system of the National Land Cadastre to the authorized bodies for land-related issues within five working days.

The authorized bodies for land-related issues shall prepare a land reservation proposal on the basis of available and received information and send it to the state bodies, which sent the notification for approval, within five working days after the receipt of the land-cadastral information.

The land reservation proposal shall contain the following information:
1) location of the lands reserved, total area, explication;
2) purposes and terms of reservation;
3) owners and land users and servitude holders, whose land plots are located on the territory of the lands reserved (if any);
4) neighboring owners and land users;
5) layout scheme.

State bodies shall submit a statement of consent to the authorized bodies for land-related issues (in an arbitrary form) (hereinafter - the Statement) within three working days from the date of the receipt of the reservation proposal.
In case the state bodies agree with the reservation proposal, the authorized bodies for land-related issues shall forward it to the local executive body for consideration within three working days from the date of the receipt of the Statement.

For consideration of this proposal the local executive body shall establish a commission consisting of representatives of the local executive body, members of the local representative body, authorized bodies for land-related issues, structural subdivisions of relevant local executive bodies in the field of architecture and urban planning, authorized bodies in the field of environmental protection, agriculture and forestry, use and protection of water resources, the National Chamber of Entrepreneurs of the Republic of Kazakhstan, as well as local self-governing authorities (if any).

Other persons may be included in the commission at the discretion of the local executive body.

The land reservation proposal shall be considered by the commission within five working days from the date of its receipt. The commission's Statement shall be made in the form of a protocol resolution in two copies.

If the reserved land plot is a private property of individuals and legal entities, the commission will make an unfavorable statement.

Authorized bodies for land-related issues shall send a notification in any format to the state bodies authorized to implement integrated schemes of urban planning of territories, master plans for settlements, roads and railways passages schemes, documents of the state planning system of the Republic of Kazakhstan within three working days after the unfavorable statement of the commission was made, attaching a copy of the said statement.

In case of favorable statement of the commission, the local executive body decides on land reservation within seven working days from the date of its issuance.

The decision of the local executive body on land reservation shall specify:
1) the purposes and timeframes of reservation;
2) the particulars of the documents related to the reservation process;
3) the total area and category of land plots (explication);
4) the information about the owners, land users and servitude holders, a list of cadastral numbers of their land plots, which are located, fully or partially, on the territory of the lands being reserved (if any);
5) limitations.

The local executive body makes a decision on land reservation in relation to those land plots located within its administrative territory.

A copy of the decision of the local executive body on land reservation shall be sent to the state bodies and to the State corporation within seven working days from
the date of its adoption to include it into the database of the automated information system of the National Land Cadastre.

In accordance with the Land Code, the local executive body shall notify land users and servitude holders whose land plots are within the territory of the reserved land, in an arbitrary form, within thirty calendar days from the date the decision on land reservation was made, and shall ensure the availability of information about land reservation through publication in periodicals, distributed in the respective administrative territory.

The decision to terminate the land reservation process shall be published in periodicals distributed in the relevant administrative territory, as well as on special information stands and the Internet resource of the local executive body that made the decision.

A copy of the decision on terminating the land reservation process shall be sent to the State corporation within seven working days from the date of its adoption to exclude the information about the reserved lands from the database of the National Land Cadastre.

Internet link to an interactive map of land plots for auctions for the selection of renewable energy projects for 2018:

https://yandex.ru/maps/?um=constructor%3A14ce926f91aff9bab30564ced466b5c356ade4c2407e58645a888d9b0ae7441&source=constructorLink

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13. Contact details of the authorized bodies

Ministry of Energy of the Republic of Kazakhstan


The Renewable Energy Sources Department

Kulanbai Abai – 8 7172 743866

“KOREM” JSC (http://www.korem.kz/eng/)

Shukumov Anuar - 8 7172 690703


Dusenov Zhenis – 8 7172 693520
14. References


2) The Order of the Minister of Energy of the Republic of Kazakhstan dated February 22, 2018 No. 65 "On Approval of the Auction Schedule for 2018";

3) The order of the Minister of Energy of the Republic of Kazakhstan dated December 21, 2017 No. 466 “On 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”;

4) The Resolution of the Government of the Republic of Kazakhstan dated March 27, 2014 No. 271 "On Approval of the Rules for the Determination of Feed-In Tariffs and Ceiling Auction Prices"


12) The Order of the Minister of National Economy of the Republic of Kazakhstan dated February 28, 2015, No. 178 "On Approval of the Rules for Land Reservation".