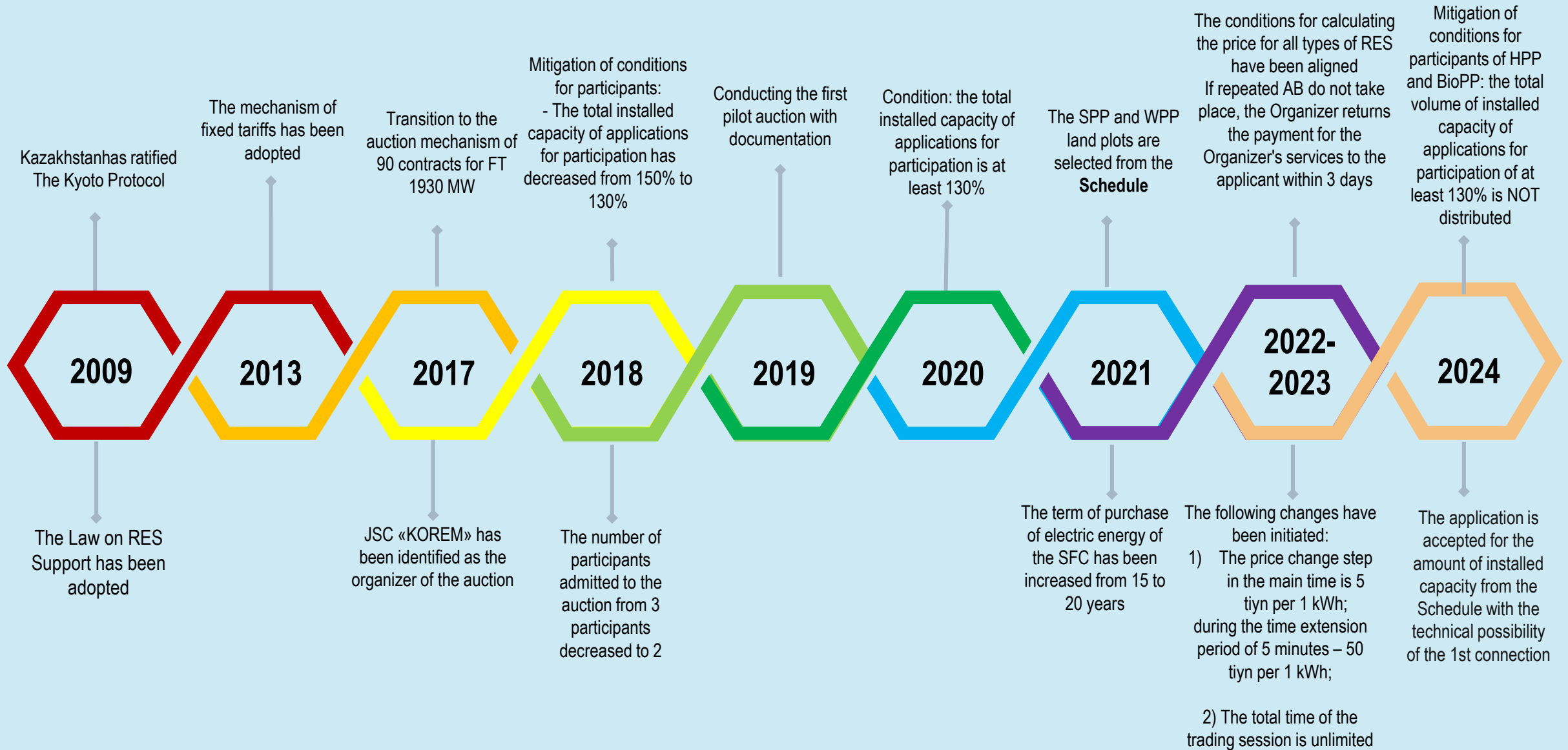


Auction bidding

RENEWABLE ENERGY SOURCES

The history of RES development in Kazakhstan



Kazakhstan has ratified The Kyoto Protocol

The mechanism of fixed tariffs has been adopted

Transition to the auction mechanism of 90 contracts for FT 1930 MW

Mitigation of conditions for participants:
- The total installed capacity of applications for participation has decreased from 150% to 130%

Conducting the first pilot auction with documentation

Condition: the total installed capacity of applications for participation is at least 130%

The SPP and WPP land plots are selected from the **Schedule**

The conditions for calculating the price for all types of RES have been aligned
If repeated AB do not take place, the Organizer returns the payment for the Organizer's services to the applicant within 3 days

Mitigation of conditions for participants of HPP and BioPP: the total volume of installed capacity of applications for participation of at least 130% is NOT distributed

2009

2013

2017

2018

2019

2020

2021

2022-2023

2024

The Law on RES Support has been adopted

JSC «KOREM» has been identified as the organizer of the auction

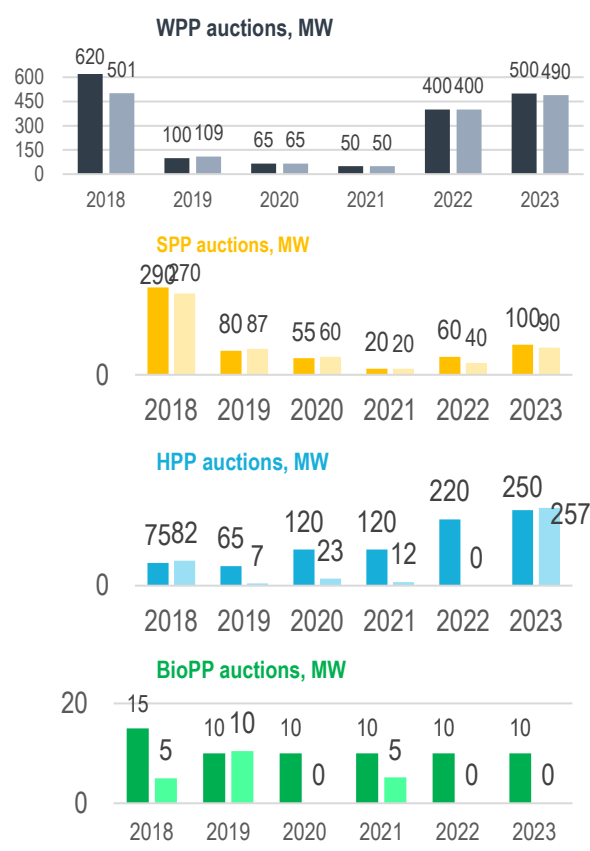
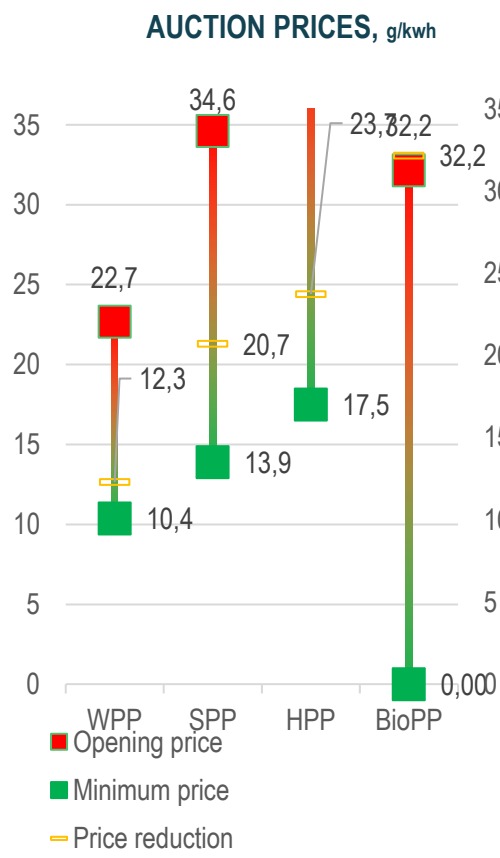
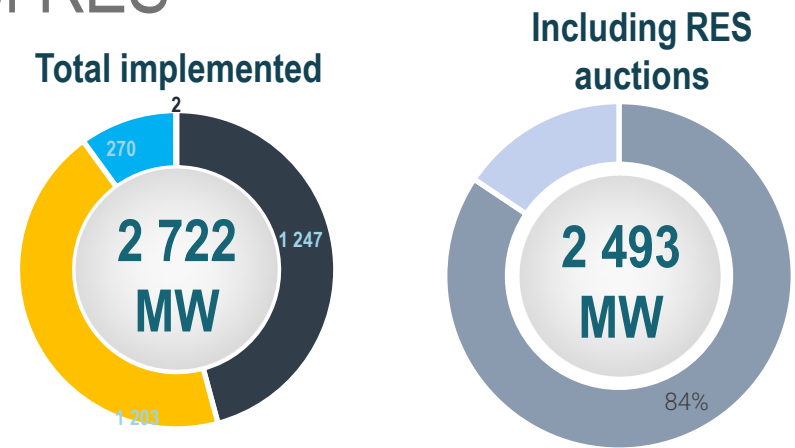
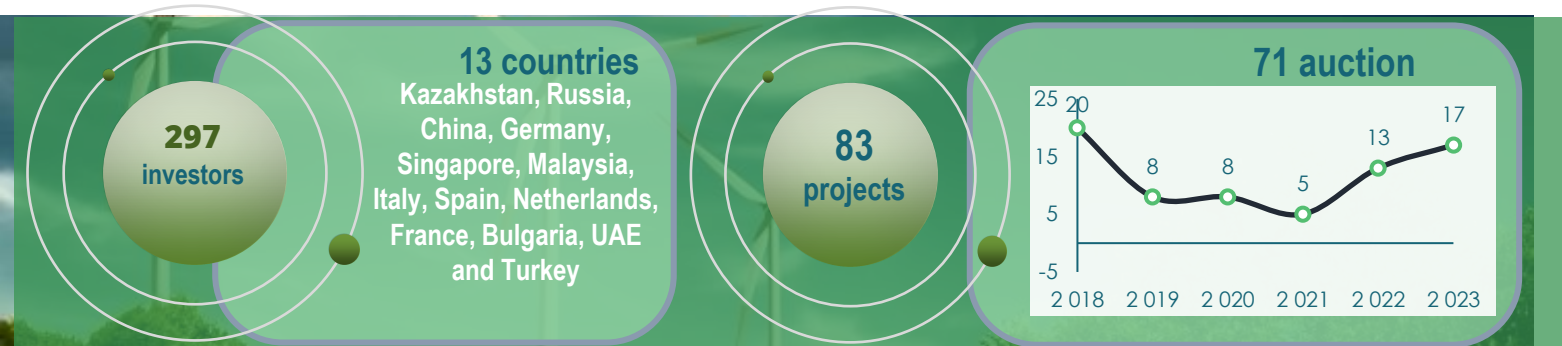
The number of participants admitted to the auction from 3 participants decreased to 2

The term of purchase of electric energy of the SFC has been increased from 15 to 20 years

The following changes have been initiated:
1) The price change step in the main time is 5 tiyn per 1 kWh; during the time extension period of 5 minutes – 50 tiyn per 1 kWh;
2) The total time of the trading session is unlimited

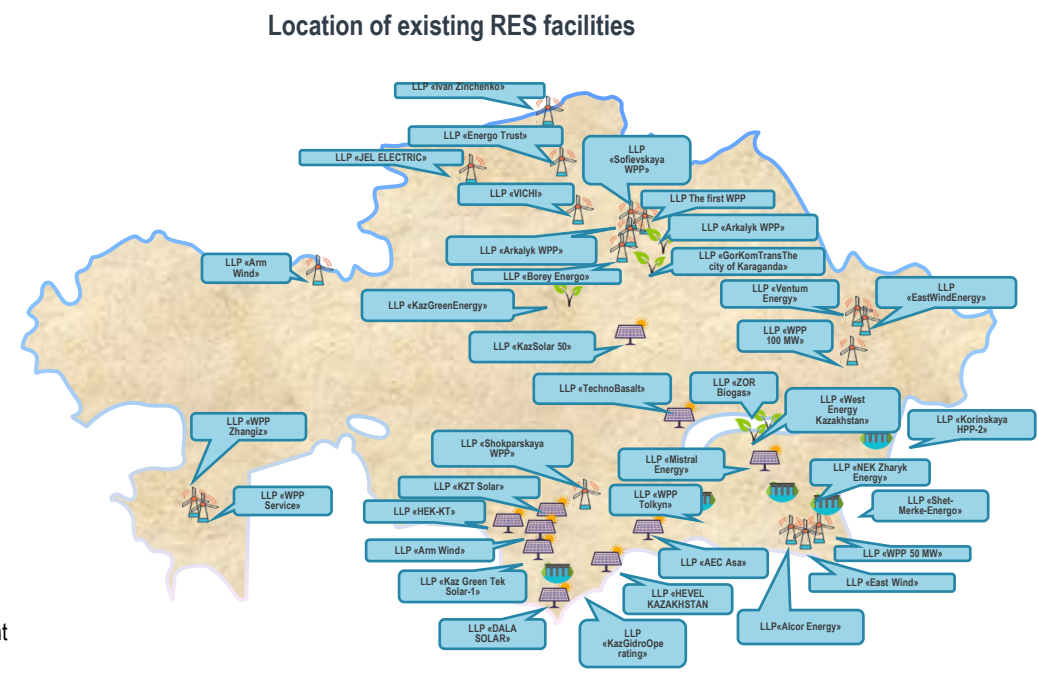
The application is accepted for the amount of installed capacity from the Schedule with the technical possibility of the 1st connection

Auctions for the selection of projects for the construction of RES



As a result of the auction for the period 2018-2023, projects were selected

- 87,9%** WPP construction of wind power plants
- 93,6%** SPP construction of solar power plants
- 44,8%** HPP construction of hydroelectric power plants
- 31,6%** Bio PP bioelectric power plant construction projects



01

5 year PLAN

On the organization and conduct of auctions for the selection of projects for the construction of RES facilities

The maximum auction price of tg/kWh 2023-2027.

HPP – 41,23
SPP – 34,61
WPP – 22,68
BioPP – 32,23

Key indicators of the industry's development by 2050

Implementation of the strategy to achieve carbon neutrality of the economy of the Republic of Kazakhstan by 2060

02

7 GW by 2030

It is planned to introduce RES generating capacities

03

15% from the total generation

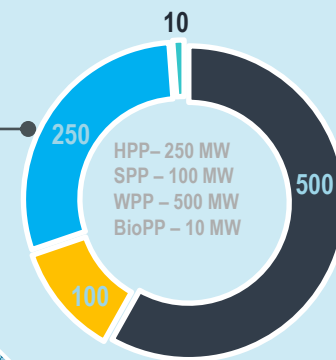
the share of RES from the total generation in the country by 2030

04

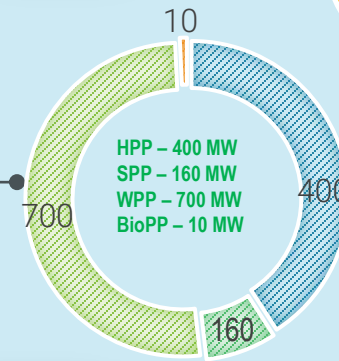
50% of the volume of production

the share of alternative energy sources and RES by 2050.

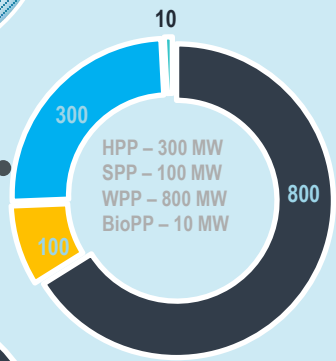
2023



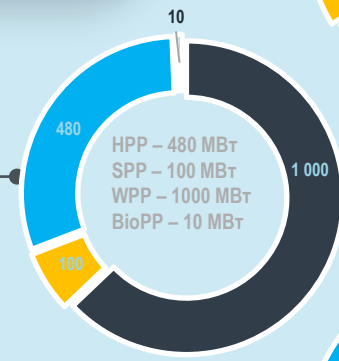
2024



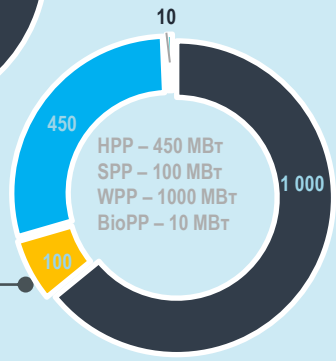
2025



2026



2027



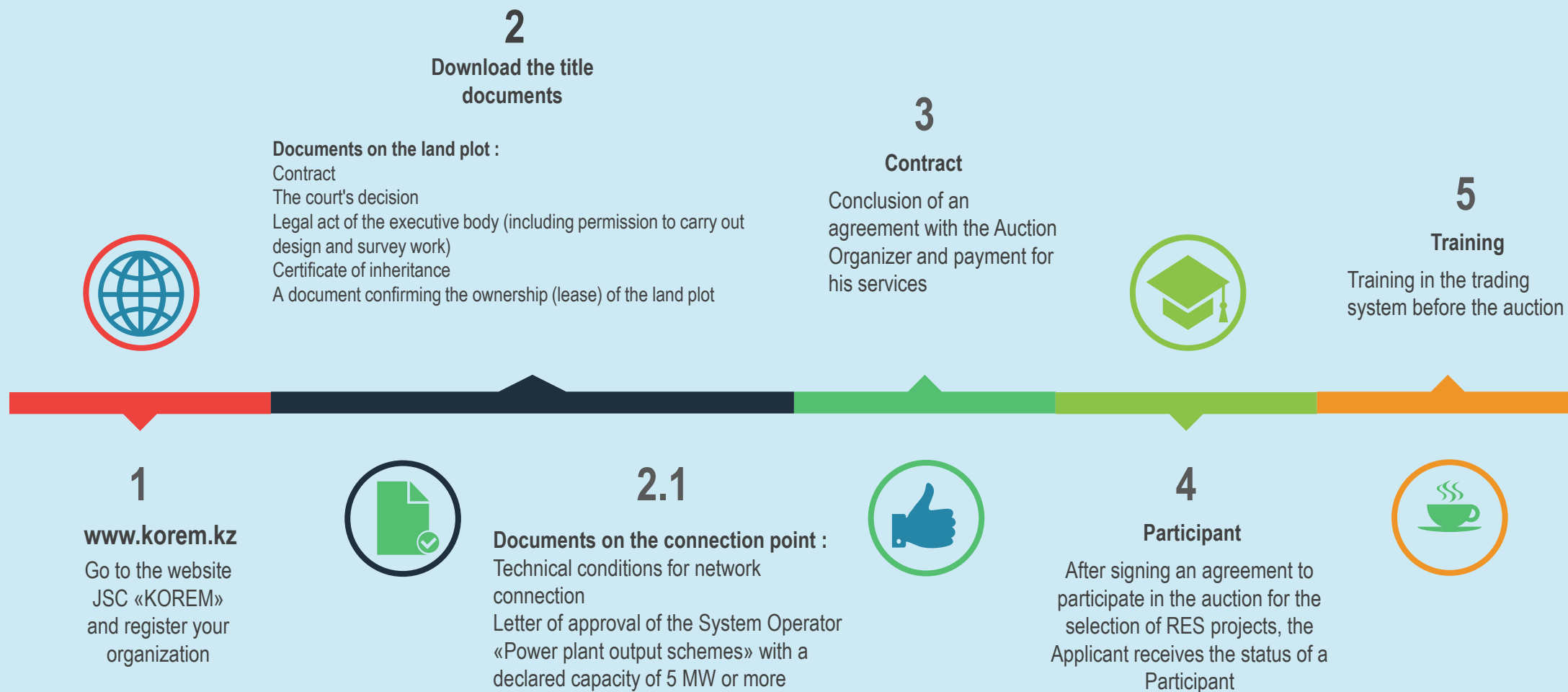
AUCTION SCHEDULE

	The volume of purchased capacity, MW	The UES Zone of the Republic of Kazakhstan	Trading date	Coordinates of the land plot	The size of the project	The maximum auction price, tg/kWh	S/S	Type of auction
HPP	20	All zones except R.Tentek	10 June 2024	--	Small	41,23	--	Without documentation
HPP	20	All zones except R.Tentek	11 June 2024	--	Small	41,23	--	Without documentation
HPP	10	All zones except R.Tentek	12 June 2024	--	Small	41,23	--	Without documentation
WPP	100	The Northern zone	13 June 2024	48.754823 58.108441 (the area around the site)	Large	22,68	Ulke	Without documentation
WPP	200	The Northern zone	14 June 2024	12-183-105-184	Large	22,68	Kostanay 1150	Without documentation
WPP	100	The Northern zone	17 June 2024	50,098340 80.407734 50°20'21" 80°19'12"...	Large	22,68	Semey	Without documentation
SPP	100	The southern zone	23 September 2024	77.09274472660809 43.916188968964576	Large	34,61	SS-143A Robot	Without documentation
				...				
SPP	20	The southern zone	24 September 2024	44.28039N 80.04229E ...	Large	34,61	175 («JSC TATEK»)	Without documentation
SPP	20	The southern zone	25 September 2024	43037'19.55"C 76022'59.47B ...	Large	34,61	SS 115A Kazybek bek	Without documentation
SPP	20	The southern zone	26 September 2024	66°52'436416""B 44°18'15,817""C ...	Large	34,61	--	Without documentation

AUCTION SCHEDULE

	The volume of purchased capacity, MW	The UES Zone of the Republic of Kazakhstan	Trading date	Land	The size of the project	The maximum auction price, tg/kWh	S/S	Type of auction
HPP	200	All zones except R.Tentek	11 November 2024	--	Large	41,23	--	Without documentation
HPP	100	All zones except R.Tentek	12 November 2024	--	Large	41,23	--	Without documentation
HPP	30	All zones except R.Tentek	13 November 2024	--	Large	41,23	--	Without documentation
HPP	20	All zones except R.Tentek	14 November 2024	--	Large	41,23	--	Without documentation
WPP	100	The Northern zone	15 November 2024	12-183-105-036	Large	22,68	Sokol	Without documentation
WPP	100	The Northern zone	18 November 2024	12-183-105-031	Large	22,68	Sokol	Without documentation
WPP	100	The southern zone	19 November 2024	43°18'54.11"N 68°38'38.9"E	Large	22,68	Ortalyk	Without documentation
BioPP	10	All zones	20 November 2024	--	Small	32,23	--	Without documentation

Registration in the trading system



Иностранные Заявители загружают аналогичные документы, переведенные на государственный или русский языки, и засвидетельствованные нотариально

Financial security



No later than **2 hours** before the start of the auction, LLP «SFC for RES» sends to JSC «KOREM» a list of applicants who have financial support for the application in the amount of :

**2000
tg/kW**

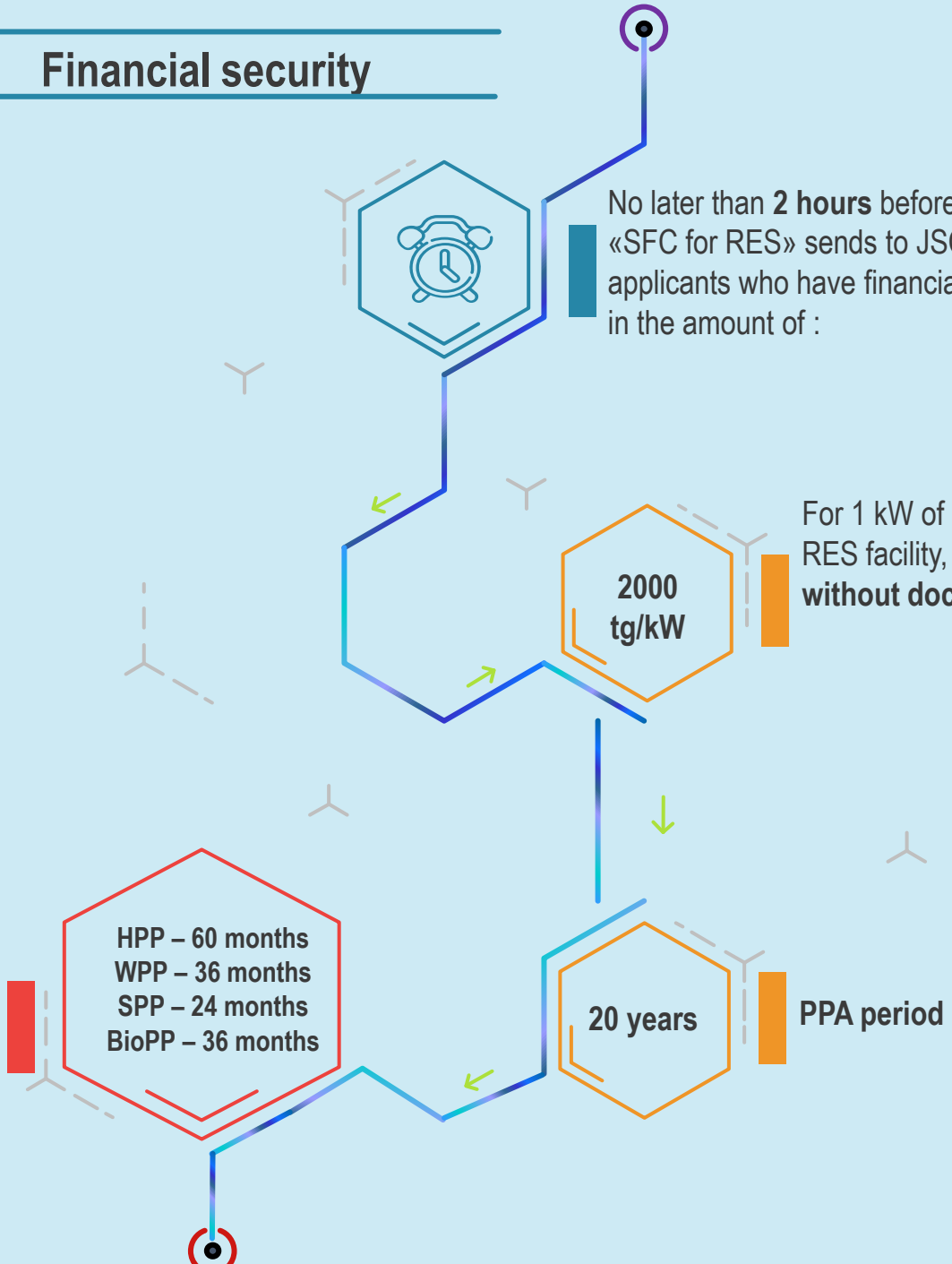
For 1 kW of installed capacity of a RES facility, to participate in **auctions without documentation**

Required commissioning date

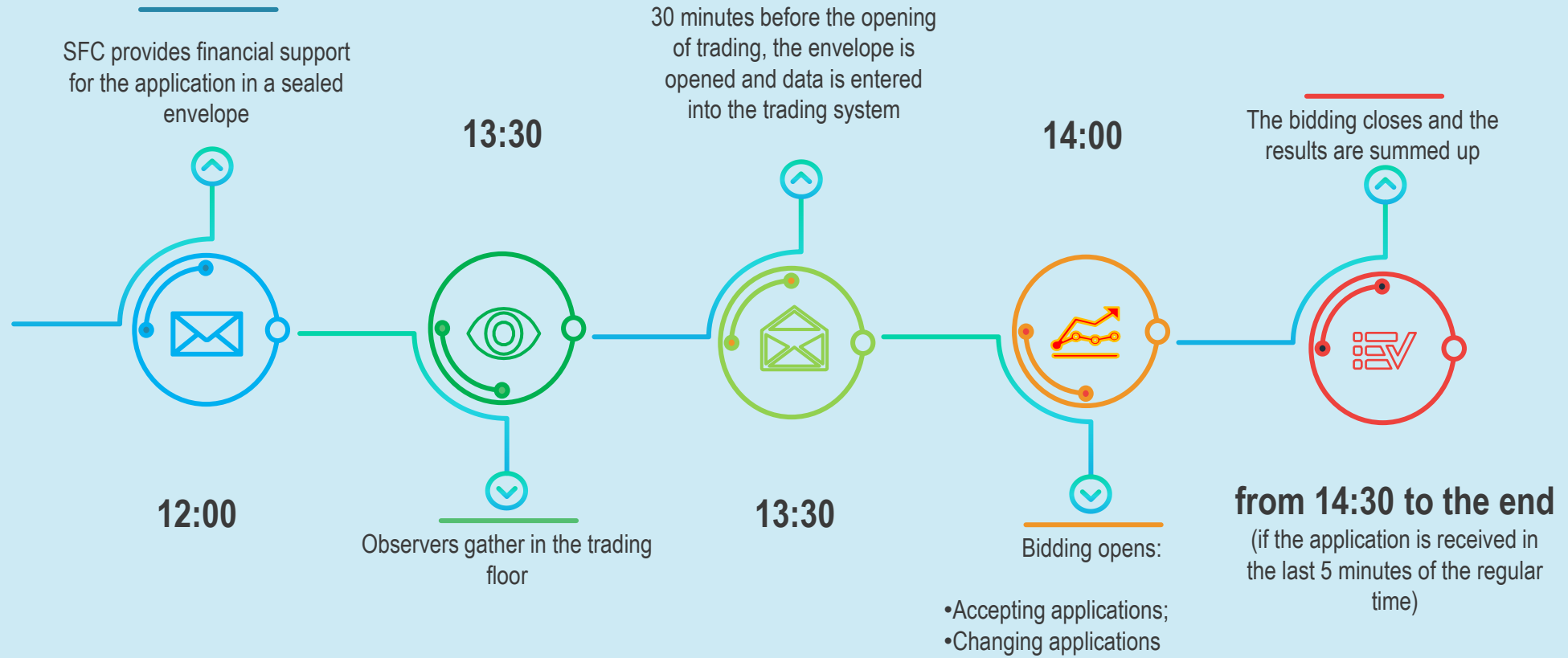
HPP – 60 months
WPP – 36 months
SPP – 24 months
BioPP – 36 months

20 years

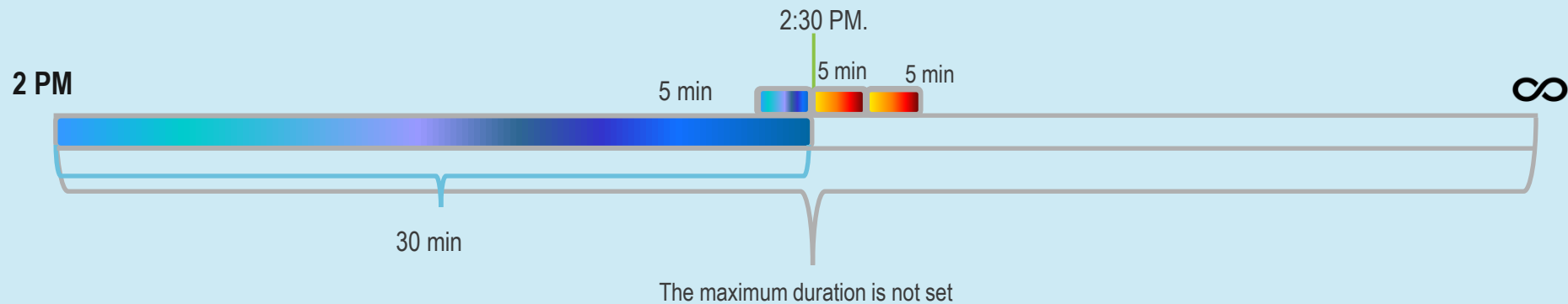
PPA period



RES AUCTION TRADING DAY



DURATION OF THE TRADING SESSION



Application conditions

Name of the participant

The price of electric energy per 1 kWh without VAT

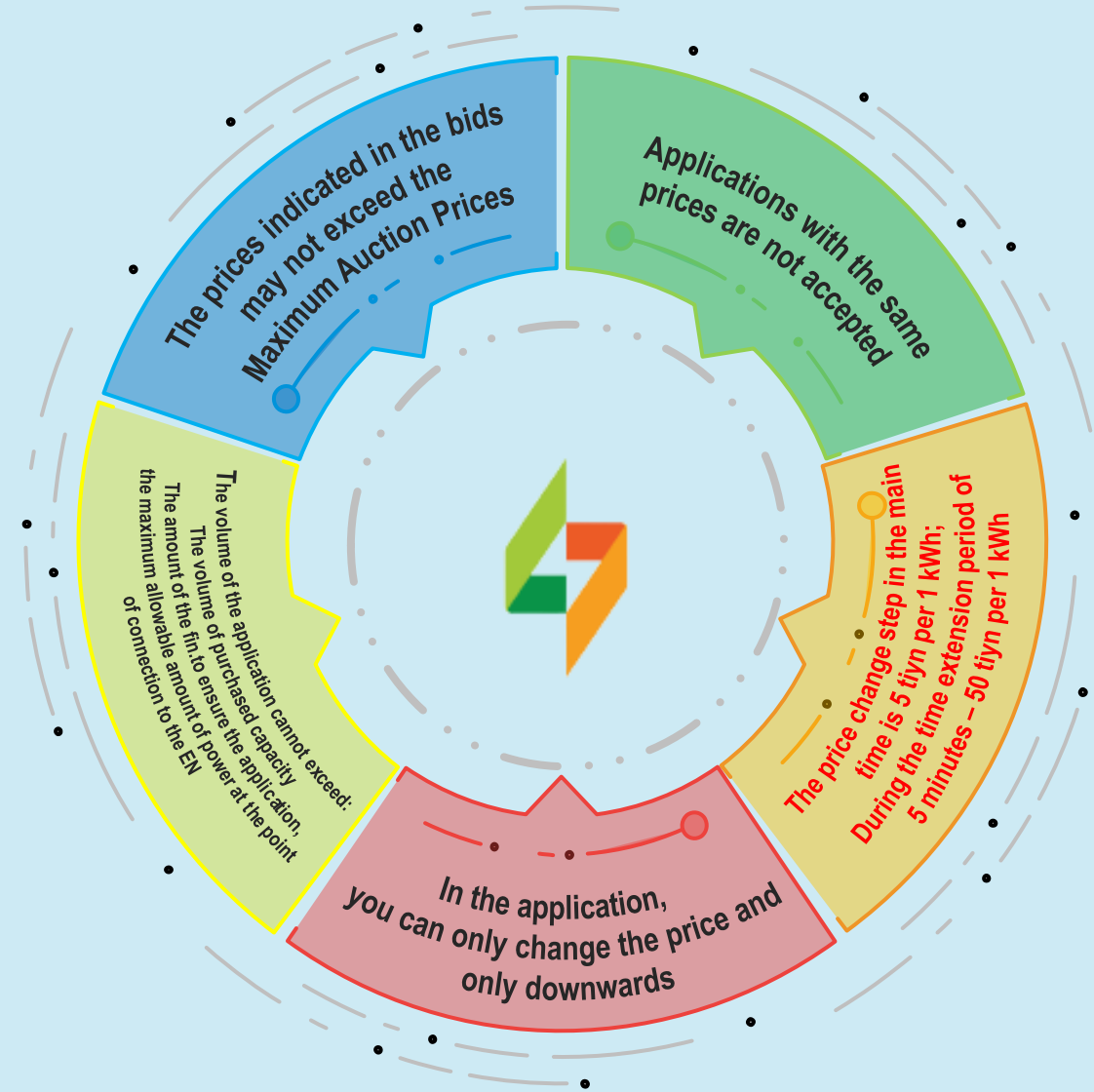
The installed capacity is at least 100 kW and a multiple of 1 kW

The minimum allowable amount of installed capacity

Type and amount of financial support for the application

The land plot and the point of connection to the electric network

THE CONTENT OF THE RES AUCTION APPLICATION



Conditions for calculating prices

The total volume of installed capacity of applications for participation in auction auctions for sale is **not less than 130% of the demand volume (except for HPP and BioPP)**

130%

The number of participants registered and admitted to the relevant auctions is **at least two**

2 participants

In case of non-fulfillment of these conditions, **the Organizer** does not calculate prices, closes the auction before the end of the closing time of the trading session and **declares the auction invalid**

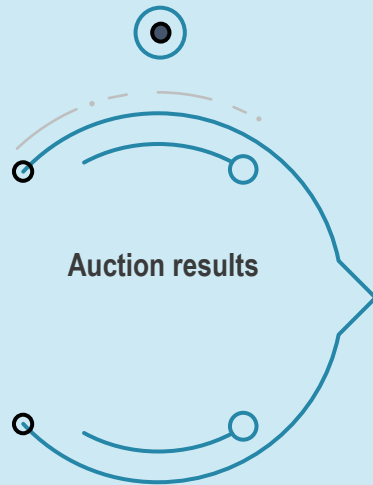


Auction results

1

According to the results of the auction, the following are determined :

- I. **The winners** of the auction;
- II. Auction **prices**;
- III. **Volumes** of selected capacity



2

A register of auction winners is formed and published on the Organizer's website **within 1 hour** after the closing of the trading session



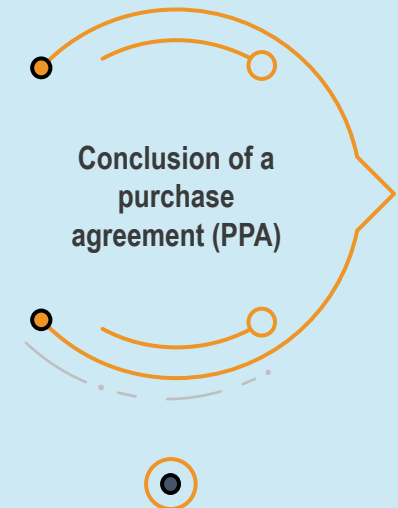
3

The Ministry of Energy of the Republic of Kazakhstan, **within 5 working days** from the date of receipt from the Organizer of the Register of Winners, includes the winners in the plan for the placement of RES facilities and the list of energy-producing organizations using RES.



4

The winners submit applications to conclude a purchase agreement with the SFC **within 60 calendar days** after being included in the register of auction winners



Auction observers

The number of observers is up to 8 people

Tasks of observers :

Checking the integrity of the envelope, the list of applicants with financial security

Monitoring the actions of the Organizer of the auction

Monitoring the process of conducting the trading session and determining the winners of the auction



The service for organizing and conducting auctions includes:



registration of bidders at auctions for the selection of renewable energy projects



ensuring modification of software and information components of the Trading System in accordance with current legislation in the field of electric power industry



maintaining the trading system in constant working order for conducting auctions for the selection of renewable energy projects.



instructing the bidding operators of the auction participant on the selection of renewable energy projects



organizing and conducting auctions for the selection of renewable energy projects;

In order to learn how to work with the software applications of the trading system, you have several options :

To be trained by the auction organizer

Complete the training yourself

TRAINING



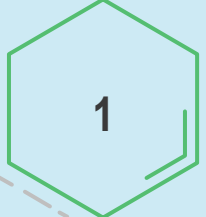
To receive training from the organizer, you need to:



You can learn how to work with the trading system software on your own

Your company has decided to become a participant in the auction and you are faced with the task of learning how to work with the trading system software

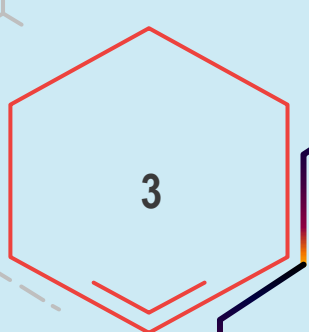
Sign a contract and pay for its service



To do this, you need to:

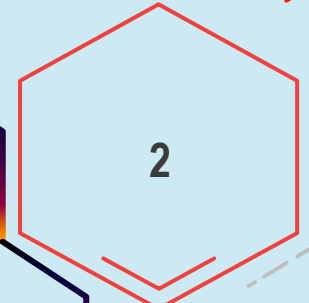
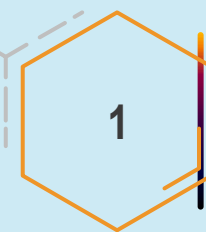


To get acquainted with the briefing program.



Choose the time and date of the training

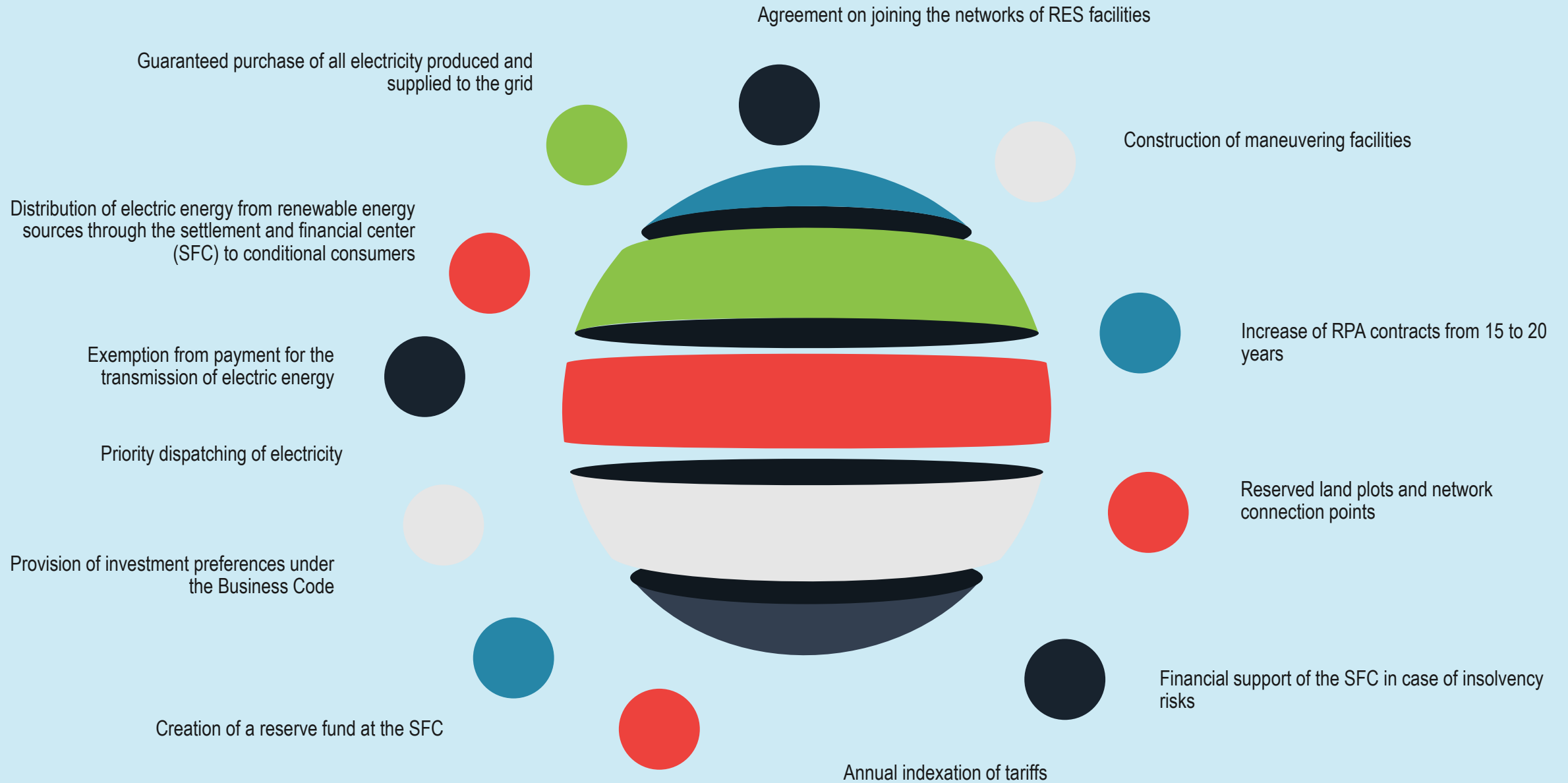
Examine the organizer's internal documents



Take interactive training on the website www.vie.korem.kz

The employee who is sent for training must study the internal documents of the Organizer

Legislatively fixed preferential conditions for the development of RES in Kazakhstan



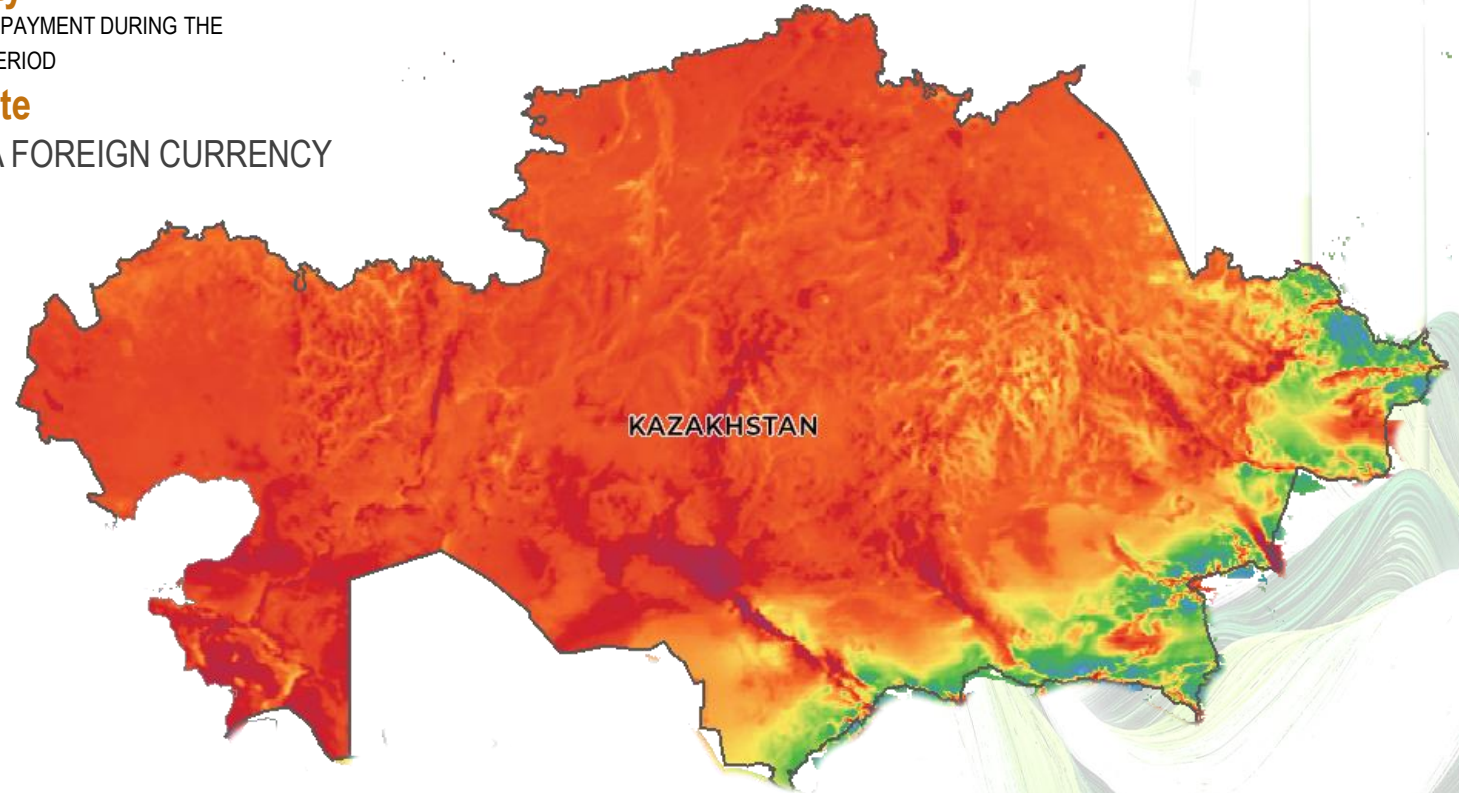
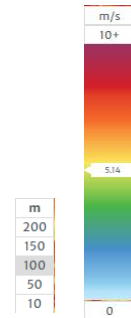
The Republic of Kazakhstan

- occupies the 9th place in the world in terms of land area
- significant potential of wind energy
- in the next 7 years, it has every opportunity to take a leading position in the world in the development of wind generation, which will be:
 - as stable as possible;
 - evenly distributed (throughout the country);
 - minimally affect the growth of tariffs for end users.

Legislative measures to support RES in Kazakhstan

- ① **at least 20 years old**
GUARANTEED PERIOD OF COMPULSORY PURCHASE OF ALL GENERATED ENERGY
- ② **custom duty**
EXEMPTION FROM PAYMENT DURING THE CONSTRUCTION PERIOD
- ③ **vacation rate**
LINKED TO A FOREIGN CURRENCY

Wind potential map



The climate in Kazakhstan is favorable for the construction of wind farms due to the presence of wind corridors with wind speeds of more than 5 m/s, which is necessary for the operation of wind turbines.

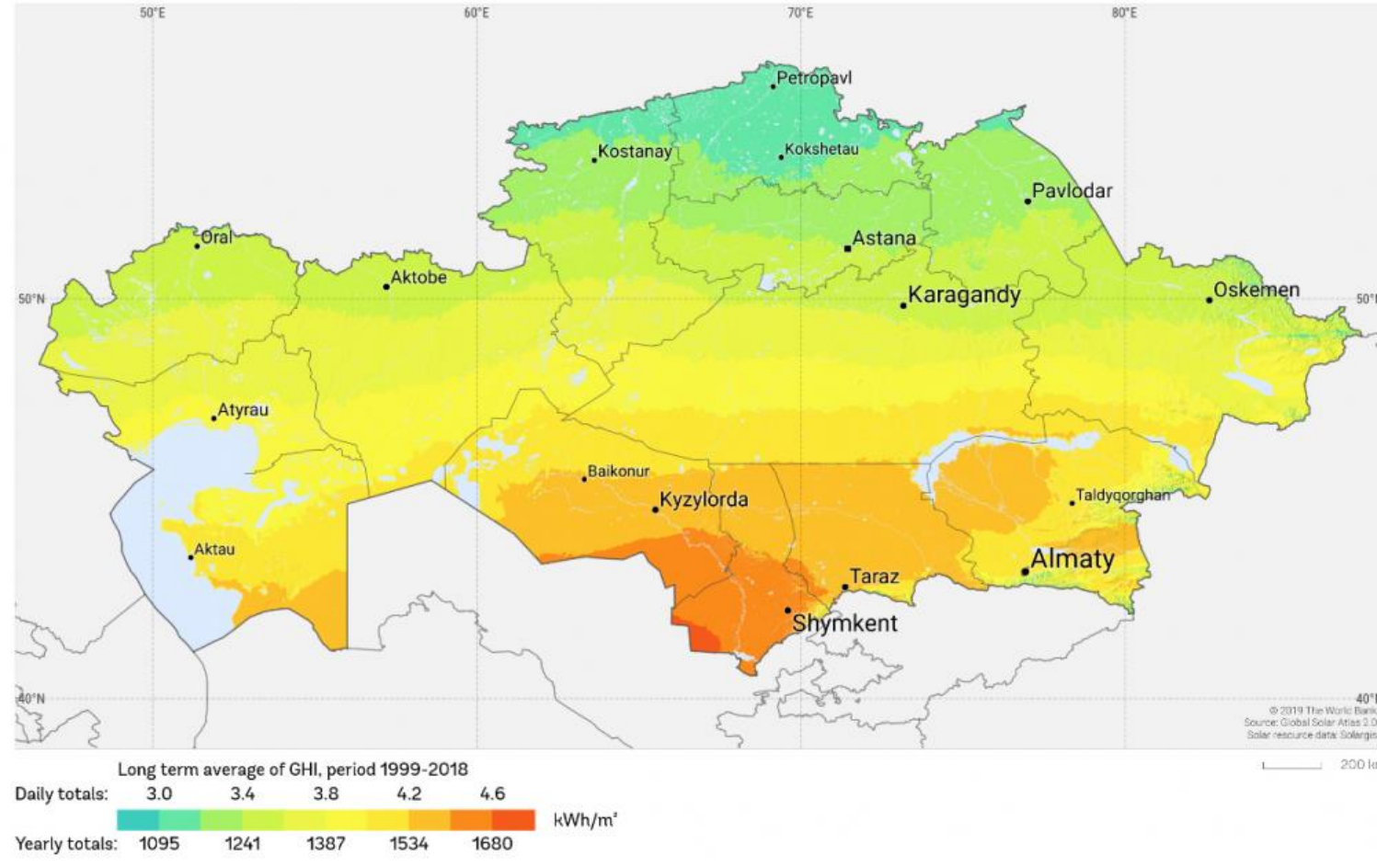
The Caspian region, central and northern Kazakhstan, as well as southern and southeastern Kazakhstan have the highest potential for wind energy.

According to the Ministry of Energy of Kazakhstan, the country's wind energy potential is estimated at 920 billion. kWh of electricity annually

Solar Potential Map

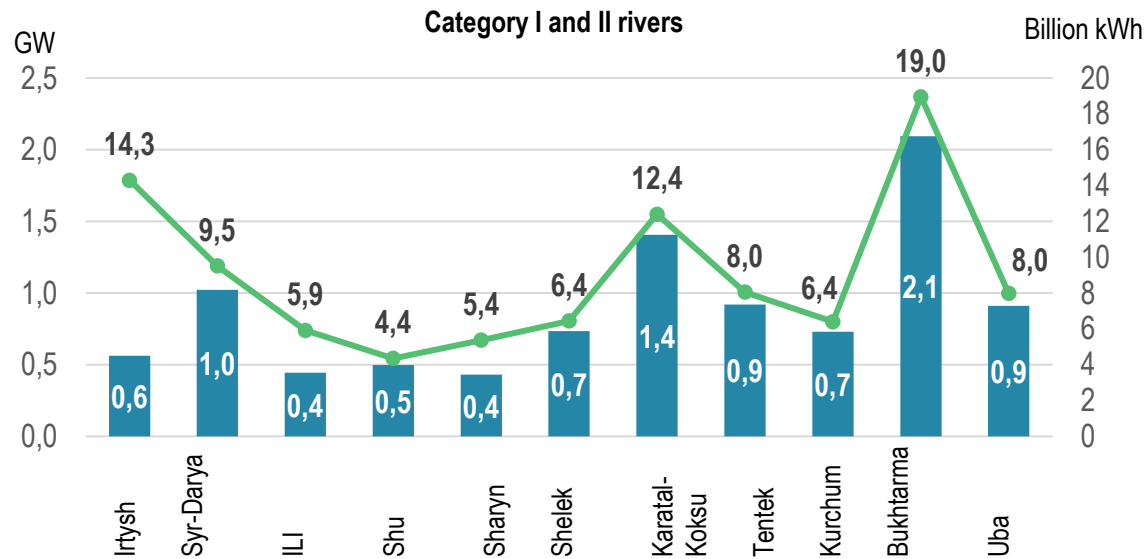
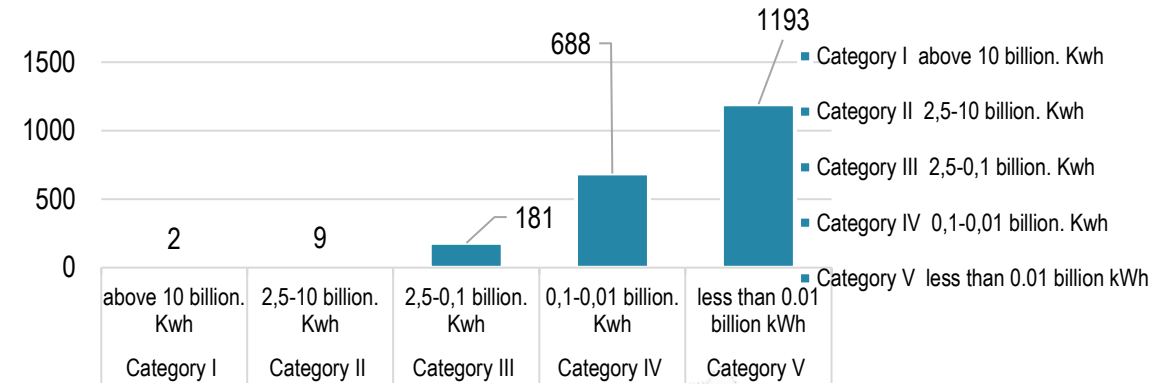
Solar energy has huge potential as a renewable energy source due to sparsely populated large areas and climatic conditions, especially in the south of Kazakhstan, where the sun shines from 2,200 to 3,000 hours per year

In Kazakhstan, the potential of solar energy is 1 trillion. kWh. The most preferred areas for solar generation are the Aral Sea region and the southern regions of Kazakhstan, which are experiencing a shortage of electricity

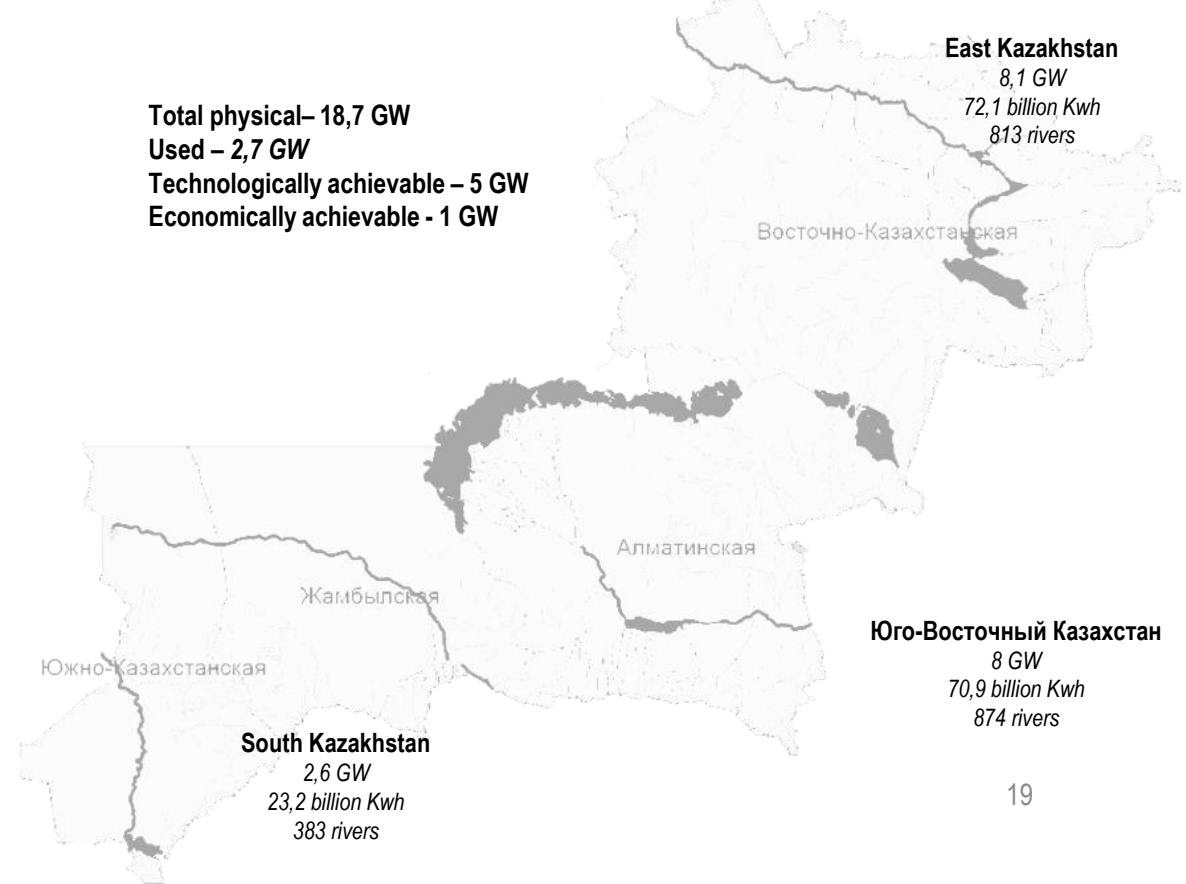


Information and characteristics of Kazakhstan's hydropower potential

The hydropotential of Kazakhstan	Number of rivers	Category I is above 10 billion kwh	Category II 2,5-10 billion kwh	Category III 2,5-0,1 billion kwh	Category IV 0,1-0,01 billion kwh	Category V less than 0.01 billion kwh
South Kazakhstan	383	1	1	20	74	287
Southeastern Kazakhstan	874	-	5	89	340	440
East Kazakhstan	813	1	3	72	274	466
TOTAL	2070	2	9	181	688	1193



Total physical – 18,7 GW
Used – 2,7 GW
Technologically achievable – 5 GW
Economically achievable - 1 GW



The calendar plan

Auction bidding in 2024

HPP, All zones, with the exception of the Tentek river, with a total capacity of 400 MW, Tariff - 41.23 tenge, June 10, 11, 12, 2024 and November 11, 12, 13, 14, 2024

WPP, Northern and Southern zones with a total capacity of 700 MW, Tariff - 22.68 tenge, June 13, 14, 17, 2024 and November 15, 18, 19, 2024

SPP, Southern zone, with a total capacity of 160 MW, Tariff – 34.61 tenge, September 23, 24, 25, 26, 2024

BioPP, All zones, with a total capacity of 10 MW, Tariff – 32.23 tenge, November 20, 2024

Acceptance of documents

From April 22, 2024

Document verification (2 business days), the direction of the draft Agreement and invoice for payment of JSC «KOREM»

Contract and payment

The deadline for the delivery of the signed Contract to JSC «KOREM» is one day before the auction (no later than 12:00 Astana time)

The deadline for payment for the services of JSC «KOREM» is one day before the auction (no later than 18:00 Astana time)

Financial support of the agreement

within 30 calendar days after signing the purchase agreement

Financial security

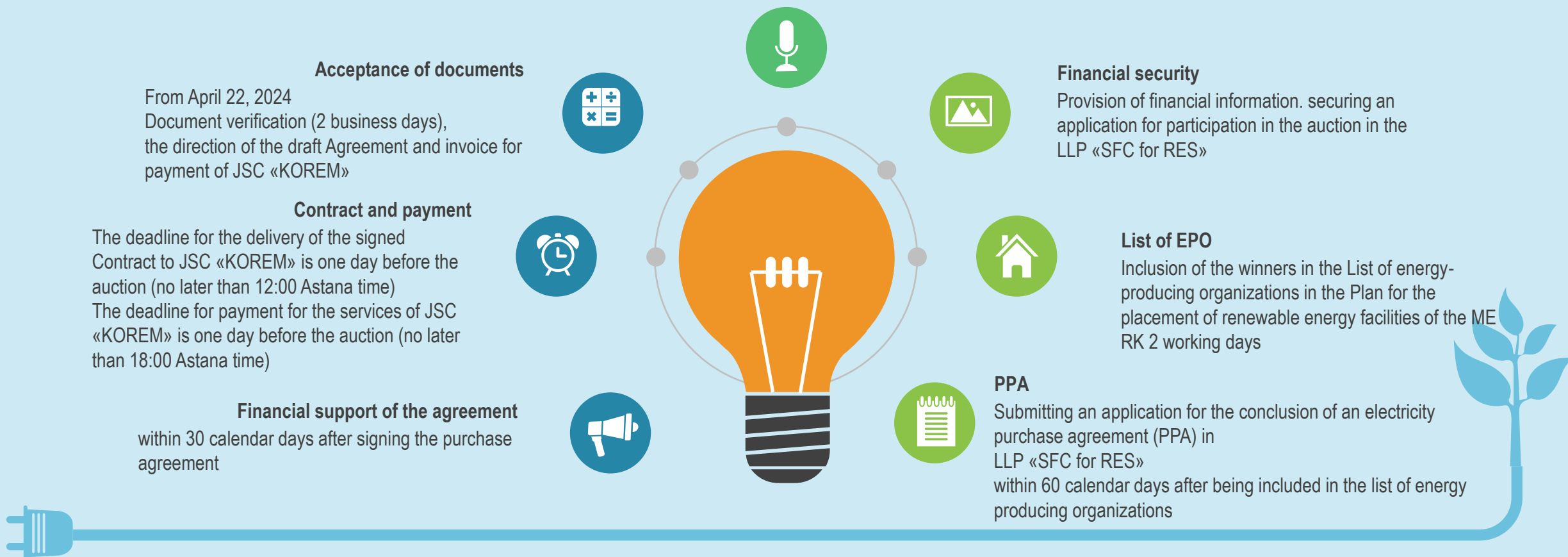
Provision of financial information. securing an application for participation in the auction in the LLP «SFC for RES»

List of EPO


Inclusion of the winners in the List of energy-producing organizations in the Plan for the placement of renewable energy facilities of the MERK 2 working days

PPA

Submitting an application for the conclusion of an electricity purchase agreement (PPA) in LLP «SFC for RES» within 60 calendar days after being included in the list of energy producing organizations



THANK YOU FOR YOUR ATTENTION!

 vie.korem.kz

 [@Korem_res](https://t.me/Korem_res)

 vie@korem.kz

8 (7172) 982 972, 982 973