USAID
FROM THE AMERICAN PEOPLE

KOREM
NARYQ OPERATORY

RENEWABLE ENERGY AUCTIONS IN KAZAKHSTAN

2018-2019 RESULTS

Nur-Sultan, 2020

Introduction

This "Report on Renewable Energy Auctions in Kazakhstan. Results for 2018–2019" provides brief information regarding the development of renewable energy (RE) in Kazakhstan, strategic goals, government policy and regulation in the field of RE, as well as statistical information and results of RE auctions in 2018 and 2019. The structure of the Report includes the following chapters:

1. Goals of RE Development in Kazakhstan
2. Current RE Development Statistics
3. State Regulation of RE Development
4. RE Auction Mechanism
5. 2018 Auction Results
6. 2019 Auction Results
7. Auction for 50 MW SPP Project in Shaulder Village, Turkestan Region
8. Conclusion
9. Annexes

This Report was prepared jointly by Kazakhstan Electricity and Power Market Operator JSC (KOREM JSC) and the USAID Power the Future Regional Program, implemented by Tetra Tech[1]

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

Abbreviations

BioPP	Biofuel power plant
RES	Renewable energy sources
WPP	Wind power plant
HPP	Hydroelectric power plant
UES RK	Unified Energy System of the Republic of Kazakhstan
KOREM	Kazakhstan Electricity and Power Market Operator JSC
MoE RK	Ministry of Energy of the Republic of Kazakhstan
MW	Megawatt
AIFC	Astana International Financial Center
FSC	Financial Settlement Center of Renewable Energy LLP
SPP	Solar power plant
PPA	Power purchase agreement
USAID	US Agency for International Development

1. Goals of RE Development in Kazakhstan

Kazakhstan has significant reserves of energy resources (oil, gas, coal, uranium). In Kazakhstan, electricity is produced primarily from coal, gas, water resources and, to a lesser extent, from renewable energy sources (Figure 1). At the same time, Kazakhstan has a great RES potential.

The most significant potential is from wind power – wind speeds of 4-5 m/s at an elevation of 30 m is typical for approximately 50% of the territory of Kazakhstan. Solar power also has great potential – the number of solar hours is 2,200-3,000 hours per year.

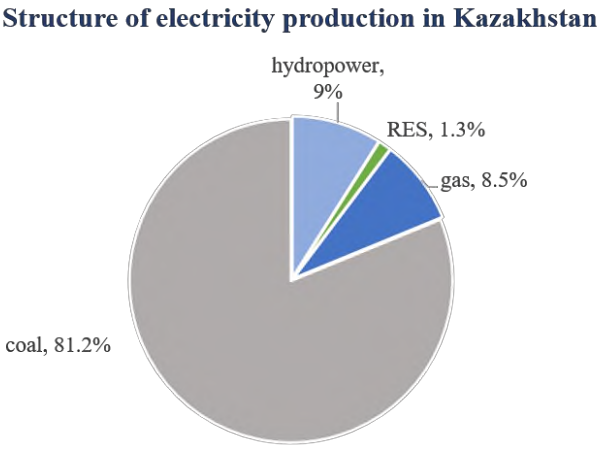

Figure 1. Electricity generation in Kazakhstan (2018)

Following international trends for low-carbon development, in May 2013, Kazakhstan adopted the Concept for the country-wide transition to a "Green Economy" and approved an ambitious goal: *by 2050, 50% of electricity should be generated from alternative and renewable energy sources.* Thus, according to the Concept of transition to a "Green Economy" and the 2025 Strategic Development Plan of the Republic of Kazakhstan, the share of RE in total electricity generation should reach 3% by 2020, 6% by 2025, 10% by 2030 and 50% (alternative and renewable energy sources) by 2050 (Figure 2).

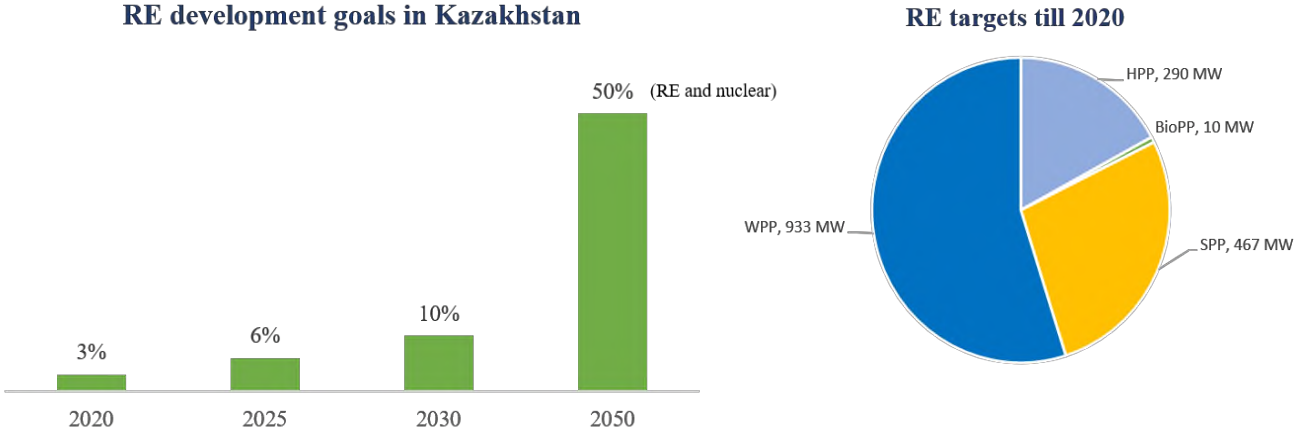

Figure 2. RE development targets in Kazakhstan

2. Current RE Development Statistics

Over the past five years, since the introduction of a feed-in tariff for RE in 2014, the number of RE projects has grown significantly. Thus, at the end of 2019, 90 RE facilities were operating in Kazakhstan with a total installed capacity of 1050.1 MW, including: WPP – 283.8 MW; SPP – 541.7 MW; small HPP – 222.2 MW; Bio PP – 2.4 MW (Figure 3). By 2025, total installed capacity is expected to be no less than 3,000 MW since power purchase agreements with off-taker (FSC) for 2,600 MW and bilateral agreements for 190 MW have already been signed, and agreements for an additional 210 MW are in progress.

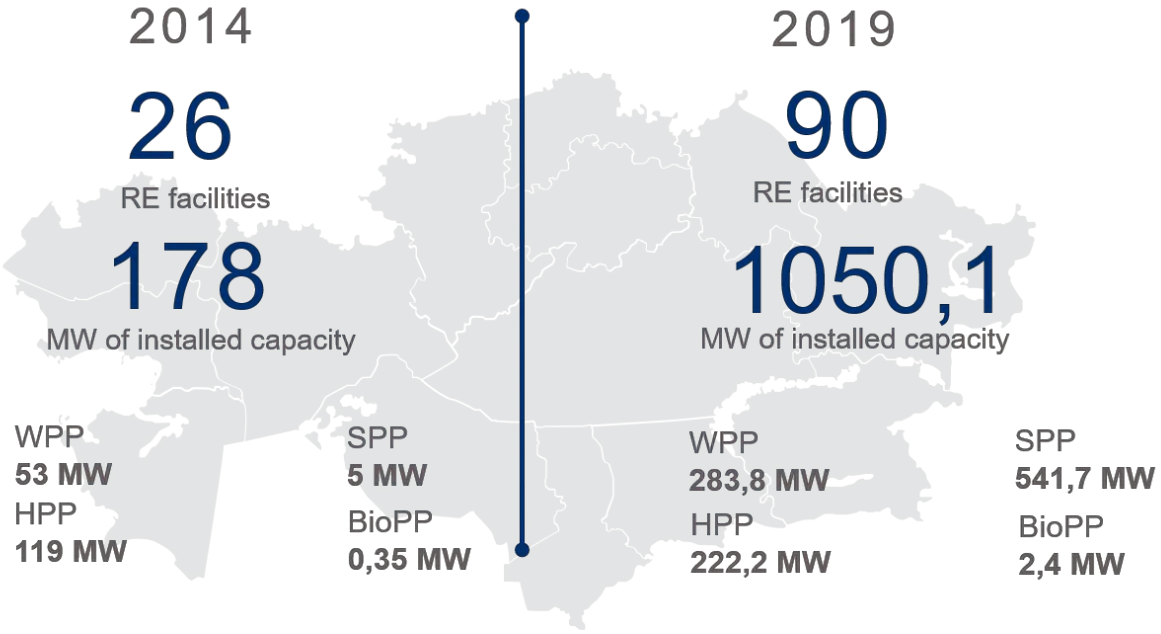

Figure 3. RE development statistics in Kazakhstan[2]

Major RE projects:

- First WPP - 45 MW;
- EXPO WPP - 50 MW;
- Burnoye Solar SPP - 100 MW;
- Saran SPP - 100 MW;
- Nurgisa SPP - 100 MW[3].

Figure 4. Burnoye Solar SPP - 100 MW and EXPO WPP - 50 MW

[2] Statistical data is provided by the Ministry of Energy of the Republic of Kazakhstan

[3] An interactive map of RE projects in Kazakhstan is available on the FSC website at https://rfc.kegoc.kz/en/vie/yamaps/index

Figure 5. RE development from 2015 to 2020

3. State Regulation of RE Development

To achieve established goals and stimulate investments in clean energy, the Government of the Republic of Kazakhstan pays special attention to the improvement of the regulatory framework. Thus, the first Law of the Republic of Kazakhstan aimed at supporting the renewable energy was adopted in 2009, and since then the institutional and legal framework for RE development has significantly improved. To date, the regulatory framework for RE investments includes the following key elements:

Single buyer of electricity produced by RE facilities	The FSC was created within the Kazakhstan Electricity Grid Operating Company JSC (KEGOC) and is the guaranteed off-taker and single buyer of electricity produced by renewable energy facilities. The FSC carries out financial settlement of imbalances from renewable energy facilities. Conventional generators are obliged to purchase from the FSC the entire amount of electricity produced by renewable energy facilities.
Tariffs	Over the period from 2014 to 2017, before the introduction of the auction mechanism, a feed-in tariff in local currency was applied to electricity produced from renewable energy sources.
	The auction mechanism was introduced in 2017. Prices now applied to individual projects were set through auctions held in 2018 and 2019.
Tariff indexation	Feed-in tariffs are subject to annual indexation: 70% for inflation and 30% for foreign currency exchange rate. Tariffs set through auctionsare also subject to annual indexation: 30% for inflation and 70% for foreign currency exchange rate.

PPA term	The PPA term is 15 years from the start date of a comprehensive test of a RE power plant, and the seller of electricity generated from RE facility should provide a financial guarantee for the fulfillment of PPA provisions at the rate of 10,000 KZT/kW of installed capacity. In addition to other terms and conditions, the PPA grants creditors the right of direct project management (step-in rights).
Construction period	The PPA allows the following periods for RE facility commissioning: SPP – 24 months, WPP and BioPP – 36 months, HPP – 48 months. However, the construction period may be extended for one year if the readiness of a RE facility is not less than 70% by the specified date of commissioning.
Dispute resolution	Disputes shall be resolved by the court at the location of the buyer (FSC), however, the PPA also grants the right to resolve disputes in the international arbitration center of the Astana International Financial Center (AIFC). AIFC regulations allow use of the IAC Rules, UNCITRAL Model Rules or ad hoc rules as arbitration regulations.
Grid connection	Access to the electric grid, priority dispatch and obligatory wheeling of electricity from RE facilities are guaranteed. The transmission system operator may not refuse to connect RE facilities once the technical readiness of the electrical grid is confirmed.
Electricity transmission	Renewable energy producers are exempt from payment for electricity transmission services and the obligation to obtain electricity generation licenses.
RE Auction	The auction mechanism was introduced in 2017. The auction is held in the form of a unilateral online auction. Land plots and grid connection points are reserved for auctions. The main criterion for the selection of auction winners is the lowest price. The PPA is awarded to RE auction winners for the period of 15 years.
Investment preferences	The Commercial Code of the Republic of Kazakhstan provides for investment preferences such as exemption from tax duties and value added tax on imported equipment, as well as state land grants, subject to fulfillment of certain conditions.

RE legislation also provides additional support for RE projects in Kazakhstan:

- Introduction of a new auction type that includes site-specific documentation (project auctions);
- Improvement of the auction procedure and qualification requirements;
- Less stringent requirements for BioPP auctions.

The Government also intends to introduce additional changes to the laws to further improve conditions for RE investments. Thus, consideration of the following issues is expected in 2020:

- Ensuring of the financial sustainability of the FSC;
- Improving RE power purchase agreement terms;
- RE integration into the Unified Energy System of the Republic of Kazakhstan (UES RK);
- Stimulation of construction of maneuverable power facilities (large hydro and gas power plants);

- Long-term planning for auctions and improving of the auction process;
- Support of domestic renewable energy equipment manufacturers;
- Provision of incentive mechanisms and financial instruments to households and SMEs (leasing, interest rate subsidizing, etc.).

The Government also plans to conduct analysis of whether RE targets will be achieved by 2050, considering plans for nuclear power plants and other alternative energy sources.

4. RE Auction Mechanism

The auction mechanism was introduced at the end of 2017 instead of a feed-in tariff to select the most effective projects and determine competitive market prices for electricity produced by renewable energy facilities. Based on international experience, *RE Auction Rules* were developed, which included the qualification requirements for auction participants, the bidding and application submission procedure, types of financial guarantee and terms for the provision and repayment thereof, procedures for confirming the results and determining the winners, etc.

The Kazakhstan Electricity and Power Market Operator JSC (KOREM JSC), which provides an electronic trading platform is named as the auction organizer. The Ministry of Energy approves the annual *Auction Schedule*, which includes the following: information on the proposed land plots and grid connection points, the amount of installed capacity (MW) to be auctioned, type of RE technology, starting auction ceiling price (KZT/kWh), project size (small, large), auction type, RE facility location within the UES RK, auction date and time.

Key characteristics of the auction mechanism in Kazakhstan

- **Auction schedule –** auctions are held according to the schedule, and sessions are held separately for certain RE types and regions (north, west and south) considering the technical connection limitations. RE auctions are classified in terms of installed capacity: small - up to and including 10 MW and large - over 10 MW.
- **Auction format** – a unilateral auction is held online within the electronic trading system; the main criteria used to determine auction winners is the lowest price. Auction starting ceiling prices are established by the Ministry of Energy. For the 2018 auctions, the auction ceiling prices were set at the level of the feed-in tariff for each RE type. For the 2019 auctions, the auction ceiling prices were set at the maximum auction price by RE type, proposed at the 2018 auctions.
- **Auction type** – auctions with and without project documentation. Auctions with project documentation were introduced in 2019. When using this auction type, potential investors are provided in advance with project detailed information and technical data (such as land plots, resource potential, preliminary feasibility study, power distribution scheme, specifications, environmental impact assessment, etc.). More detailed information and calculations allows investors to offer a lower auction price.
- **Primary pre-qualification criterion** for auction trading session is the provision of a financial guarantee at the rate of 2,000 KZT/kW of installed capacity for auctions without project documentation, and 5,000 KZT/kW of installed capacity for auctions with project documentation. The financial guarantee should be provided in the form of a bank guarantee or a standby letter of credit issued to the FSC in the SWIFT system.
- **Criteria for recognition of auctions as valid**: (a) participation of at least two bidders, (b) total volume of applications should be more than 130% of the announced capacity.[4] Paragraph

[4] During the first auctions held in spring 2018, the auction was recognized as valid subject to the participation of at least three bidders and a total volume of bids for not less than 150% of the installed capacity. With these criteria, 2 of the 10 auctions were void. During the subsequent auctions held in autumn, these requirements were relaxed to 2 bidders and 130% of the installed capacity. The terms and conditions for BioPP projects were also relaxed.

(b) is not applicable for auctions for BioPP projects.

- **Auction results** – the winners and the FSC sign a power purchase agreement with a validity period of 15 years. When signing a contract, the winner should provide the FSC with a PPA performance bond at the rate of 10,000 KZT/kW of RE project installed capacity. Auction winners with signed PPA are obliged to use only new generating equipment for the construction of RE facilities.

5. Auction Results for 2018

In February 2018, the Ministry of Energy announced the first auctions for the selection of RE projects and published the Auction Schedule for 2018. According to the Schedule, the total installed capacity declared for the auction amounted to 1,000 MW with a breakdown by the following power plant type: WPP – 620 MW; SPP – 290 MW; HPP – 75 MW; BioPP - 15 MW.

In 2018, *the starting auction ceiling prices* were established at the level of the following feed-in tariffs:

- WPP – 22.68 KZT/kWh (6 US cents/kWh)[5];
- SPP – 34.61 KZT/kWh kWh (9.2 US cents/kWh);
- HPP – 16.71 KZT/kWh kWh (4.4 US cents/kWh);
- BioPP – 32.23 KZT/kWh kWh (8.6 US cents/kWh).

A total of 20 auctions were planned (11 for small and 9 for large RE projects), of which 7 auctions were recognized as void due to an insufficient number of bidders or insufficient amount of applications.

Overall, during the 2018 auctions, 36 RE projects with total installed capacity of 857.93 MW were selected, including: WPP – 500.85 MW, SPP – 270 MW, small HPP – 82.08 MW and BioPP – 5 MW (Figure 6).

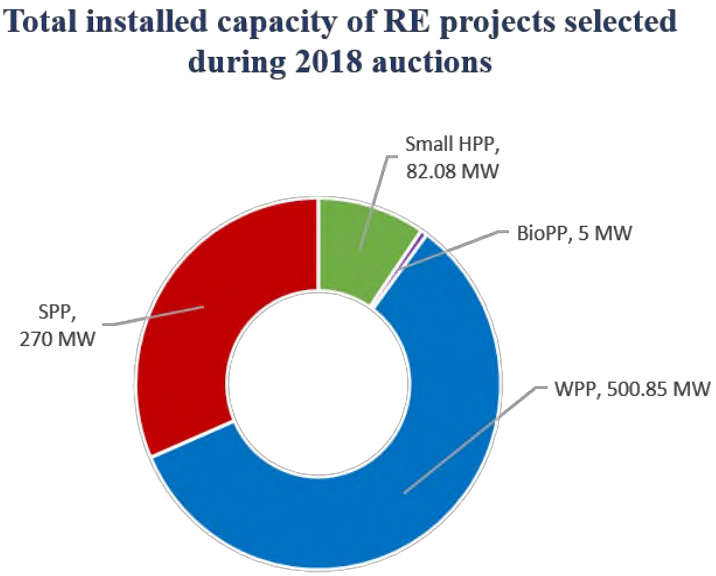

Figure 6. Auction results for 2018

Auction participants included 113 local and international companies from 9 countries: Kazakhstan, Russia, China, Turkey, France, Bulgaria, UAE, Italy and the Netherlands. Bids for a total capacity of 3422 MW were received meaning demand was 3.4 times greater than supply. 85% of the proposed capacity was cleared at the auctions. Bidders had interest in projects of all proposed RE types.

[5] The KZT / USD exchange rate for 20.01.2020 was 376.51.

In particular, the demand for BioPP, HPP and WPP projects was approximately twice as great as the auctions offer. However, investors showed the greatest interest in SPP projects, for which demand was seven times higher than the auctions offer.

According to the auction results, the largest auction prices decreases were at: WPP projects - 23.3%, SPP – 48%, small HPP – 23.4%, BioPP – 0.25% (Figure 7).

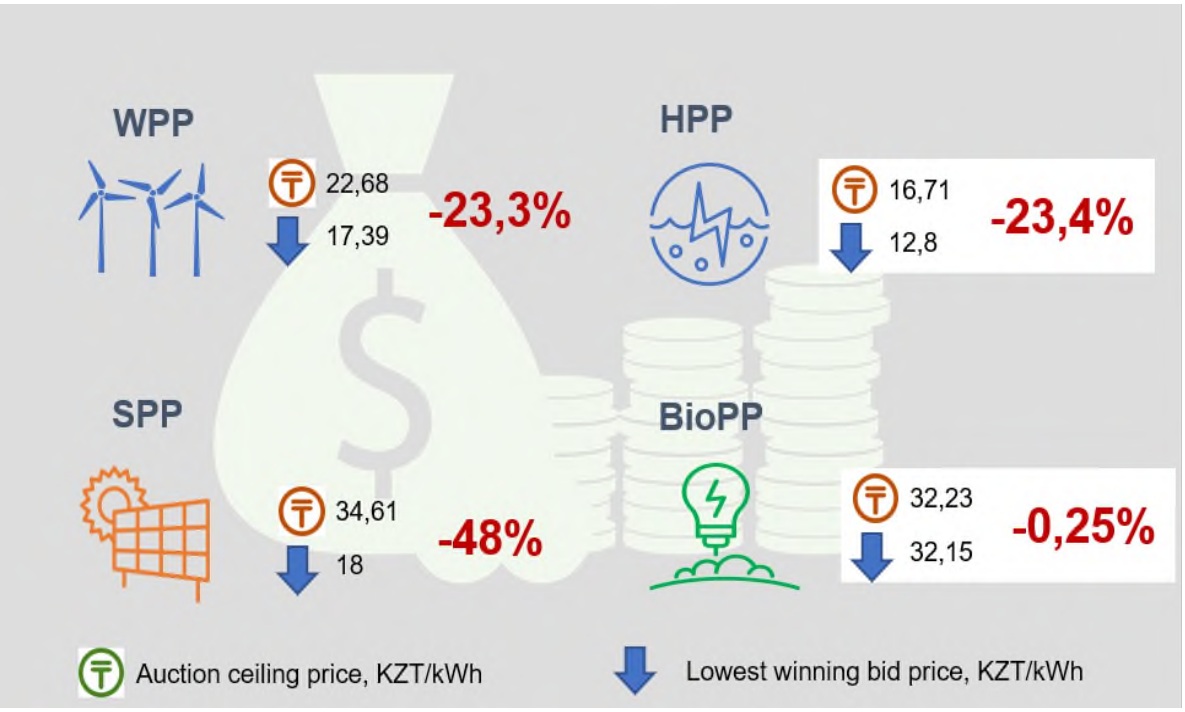

Figure 7. Price decrease during 2018 auctions

These results confirmed that auctions ensure price decreases and make it possible to determine market prices for electricity produced by RE facilities. More detailed 2018 auction results are provided in Table 1 below. The list of 2018 auction winners is provided in *Annex 1*.

Table 1. Results of 2018 RE auctions

RE technology	Auctions capacity (MW)	Capacity proposed by bidders (MW)	Capacity successfully auctioned (MW)	Number of projects selected	Starting auction ceiling price (KZT/kWh) / (US cents/ kWh)	Minimum auction price (KZT/ kWh) / (US cents/ kWh)
Wind	620	1235.85	500.85	16	22.68 / 6	17.39 / 4.6
Solar	290	2023.10	270	12	34.61 / 9.2	18 / 4.8
Small HPP	75	152.50	82.08	7	16.71 / 4.4	12.80 /3.4
Biogas	15	10.90	5	1	32.23 / 8.6	32.15 / 8.5
Total:	**1,000**	**3,422**	**857.93**	**36**	-	-

6. Auction Results for 2019

According to the Schedule approved by the Ministry of Energy for 2019, RE auctions were announced for a total of 255 MW of installed capacity with the following types of power plants: WPP – 100 MW; SPP – 80 MW; HPP – 65 MW; BioPP – 10 MW.

A total of 8 auctions were planned and held (4 for small and 4 for large RE projects), including 7 auctions without and one auction with project documentation[6]. According to the Rules for determination of feed-in tariffs and auction ceiling prices, the auction ceiling prices for 2019 auction were determined based on the maximum price proposed by auction participants in 2018. Thus, the starting auction ceiling prices for 2019 auctions were set at the following levels (excluding VAT):

- WPP – 22.66 KZT/kWh (6 US cents/kWh)[7];
- SPP - 29 KZT/kWh (7.7 US cents/kWh);
- HPP – 15.48 KZT/kWh (4.1 US cents/kWh);
- BioPP – 32.15 KZT/kWh (8.5 US cents/kWh).

Overall, during the 2019 auctions, 13 RE projects were selected with a total installed capacity of 212.89 MW, including: WPP – 108.99 MW, SPP – 86.5 MW, HPP – 7 MW and BioPP – 10.4 MW (Figure 8). Auction participants included 32 local and international companies from 8 countries: Kazakhstan, Russia, China, Germany, Malaysia, Italy, Spain and the Netherlands.

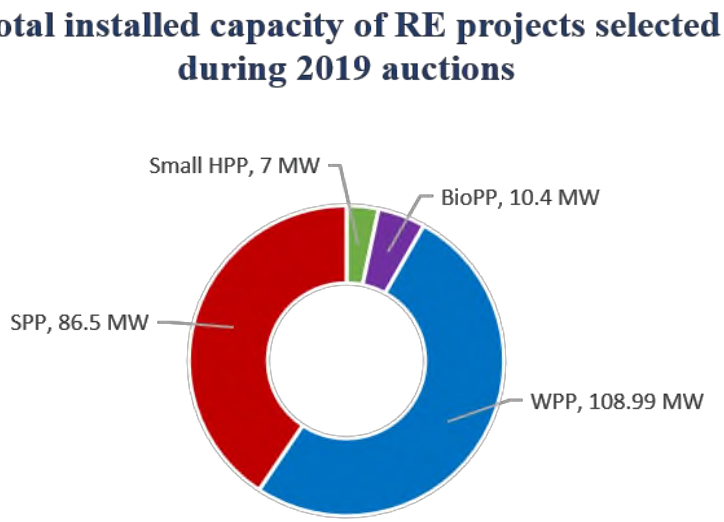

Figure 8. Auction results for 2019

Bids for total capacity of 818.99 MW were received, meaning the level of demand was 3.2 times greater than the level of supply. 83 % of the proposed capacity was cleared at the auctions and auction winners had an interest in projects of all proposed RE types. In particular, demand for WPP was 2.8 times greater than supply. However, investors were most interested in SPP, for which demand was 6.5 times higher than supply.

[6] In 2019, the Auction Rules were amended and classification of auctions with and without project documentation was introduced. When holding site-specific auctions with project documentation, potential investors are provided with a package of documents that describe the basic project parameters. This documentation includes marketing research for the construction of new RE facilities, including the resource potential assessment, results of public hearings and preliminary environment impact assessment, land plot location considering specifications and costs for purchase/lease of land plots, power distribution schemes and grid connection specifications.

[7] The KZT / USD exchange rate for 20.01.2020 was 376.51.

Through the auctions, the largest price reduction was 15% under WPP, 66% under SPP, 0.3% under HPP and 0.1% under BioPP. (Figure 9).

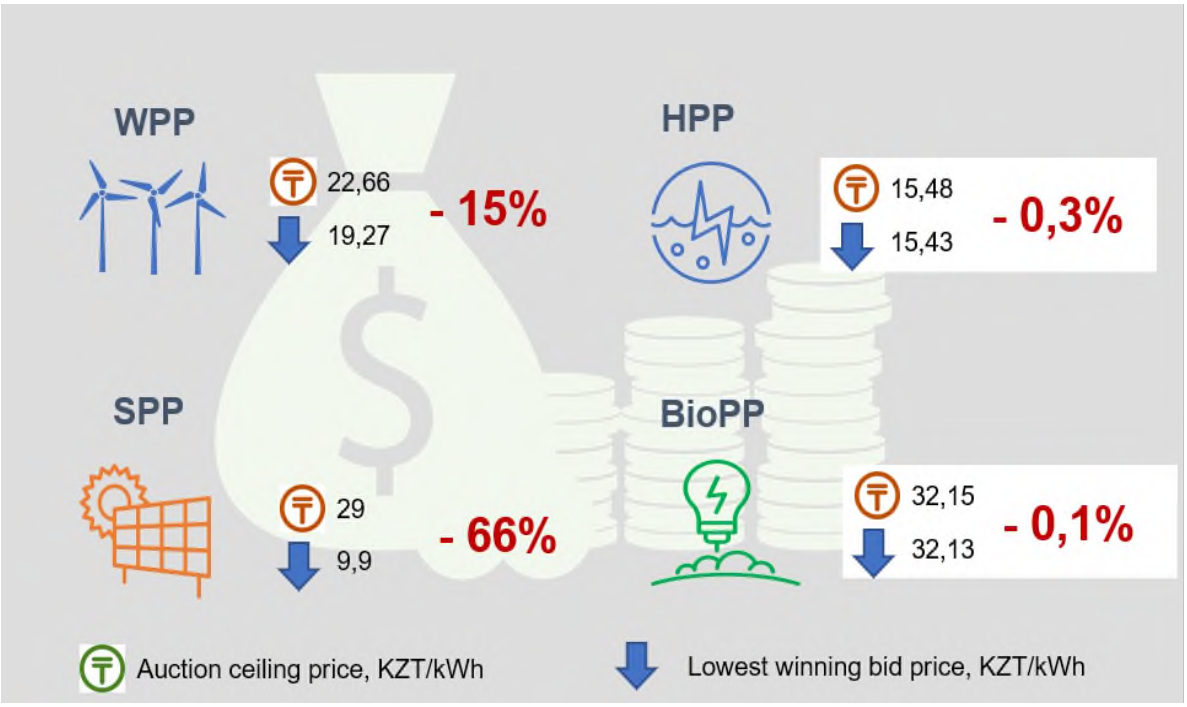

Figure 9. Price decrease during auctions in 2019

The table below provides auction results for 2019. The list of auction winners in 2019 is provided in *Annex 2.*

Table 2. Results of 2019 RE auctions

RE technology	Auction capacity (MW)	Capacity proposed by bidders (MW)	Capacity successfully auctioned (MW)	Number of projects selected	Starting auction ceiling price (KZT/kWh) / (US cents/ kWh)[8]	Minimum auction price (KZT/kWh) / (US cents/ kWh)
Wind	100	278.99	108.99	5	22.66 / 6	19.27 / 5.1
Solar	80	522.6	86.5	3	29 / 7.7	9.9 / 2.6
HPP	65	7	7	2	15.48 / 4.1	15.43 / 4
Biogas	10	10.4	10.4	3	32.15 / 8.5	32.13 / 8.5
Total:	**255**	**818.99**	**212.89**	**13**	-	-

[8] The KZT / USD exchange rate for 20.01.2020 was 376.51.

7. Auction for 50 MW SPP Project in Shaulder Village, Turkestan Region

As noted above, in 2019 the Auction Rules were amended and a new auction type – project-specific auction (with project documentation) was introduced. The project-specific auction type assumes offering RE projects where potential investors are provided in advance with detailed information on project parameters, including marketing research for the construction of a new RE facility, resource potential assessment, grid connection specifications, etc. According to international experience, these types of auctions allows investors to propose lower prices for electricity.

During 2019, as part of the UNDP/GEF Project "De-risking Renewable Energy Investments", a documentation package was prepared for the 50 MW SPP auction, including necessary calculations, resource potential assessment, land plot location, taking into account specifications and costs for purchase/lease of land plots, results of public hearings and preliminary environment impact assessment, power distribution schemes and grid connection specifications, etc.

More stringent requirements were imposed for this auction type – the amount of financial guarantee was increased from 2,000 to 5000 KZT per 1 kW of installed project capacity. 14 companies were preliminarily registered in KOREM's trading system to participate in the auction. However, only 7 companies were admitted to the auction. Others failed to provide the financial guarantee for the auction bid.

The auction was held on November 27, 2019. The seven companies from following six countries participated in the auction: Kazakhstan, Italy, Russia, Germany, China and the Netherlands. During the trading session, bidders submitted 95 price quotations, with a starting auction price of 29 KZT/kWh and a final price of 12.49 KZT/kWh, 2.3 times lower.

Table 3. Results of auctions involving documentation under the 50 MW SPP Project in Shaulder Village

RE technology	Auction capacity (MW)	Capacity proposed by bidders (MW)	Capacity successfully auctioned (MW)	Number of submitted bidding prices	Starting auction price (KZT/kWh) / (US cents/ kWh) [9]	Minimum auction price (KZT/kWh) / (US cents/ kWh)
Solar	50	350	50	95	29 / 7.7	12.49 / 3.3

The goal for introducing the auction with project documentation was to provide investors with more detailed and comprehensive RE projects to reduce investment risks during the construction and receive a lower price for electricity. Despite the higher financial guarantee required to participate in the auction, this auction type saw greater demand from international investors and allowed the organizer to exclude companies lacking the financial ability to implement the project.

[9] The KZT / USD exchange rate for 20.01.2020 was 376.51.

8. Conclusion

The first RE auctions were held in Kazakhstan in 2018. A total of 28 RE auctions for a total 1255 MW of installed capacity were held in 2018-2019 years. Total capacity successfully auctioned amounted to 1070.82 MW, which included: WPP – 609.84 MW; SPP – 356.5 MW; HPP – 89.08 MW; BioPP – 15.4 MW.

Auction participants included a total of 145 companies from 12 countries: Kazakhstan, Russia, China, Turkey, the Netherlands, France, UAE, Bulgaria, Italy, Germany, Malaysia and Spain. Table 4 below summarizes the results, including total capacity selected and prices obtained.

Table 4. Results of RE auctions held in Kazakhstan in 2018-2019.

RE technology	Projects selected (MW)		Starting auction ceiling price (KZT/kWh)		Minimum auction price (KZT/kWh)		Average auction price (KZT/kWh)	
	2018	2019	2018	2019	2018	2019	2018	2019
WPP	500.85	108.99	22.68	22.66	17.39	19.27	19.92	19.76
SPP	270	86.5	34.61	29	18	9.9	22.25	13.52
HPP	82.08	7	16.71	15.48	12.80	15.43	14.68	15.46
BioPP	5	10.4	32.23	32.15	32.15	32.13	32.15	32.14
TOTAL:	**857.93**	**212.89**	-	-	-	-	-	-

Analysis of the prices proposed during auctions in 2018-2019 for wind and solar power generation shows a significant reduction from the auction ceiling prices. In the 2018 SPP auctions, the auction ceiling price was 34.61 KZT/kWh with the lowest proposed price of 18.00 KZT/kWh. In 2019, the auction ceiling price was 29.00 KZT/kWh and the lowest proposed price was 9.9 KZT/kWh. Solar power generation prices decreased 40 % overall. (Figure 10).

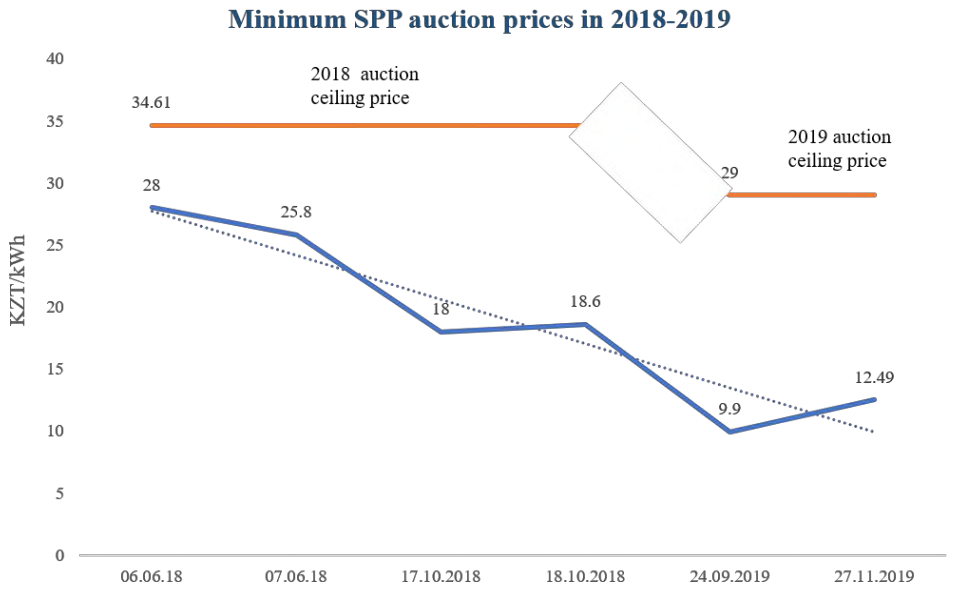

Figure 10. Price dynamics during 2018-2019 SPP auctions.

For the 2018 WPP auctions, the auction ceiling price was 22.68 KZT/kWh with the lowest proposed price 17.39 KZT/kWh. In the 2019 auctions, the lowest price was 19.27 KZT/kWh from a ceiling price of 22.66 KZT/kWh. The average price reduction for wind power generation was approximately 13% (Figure 11).

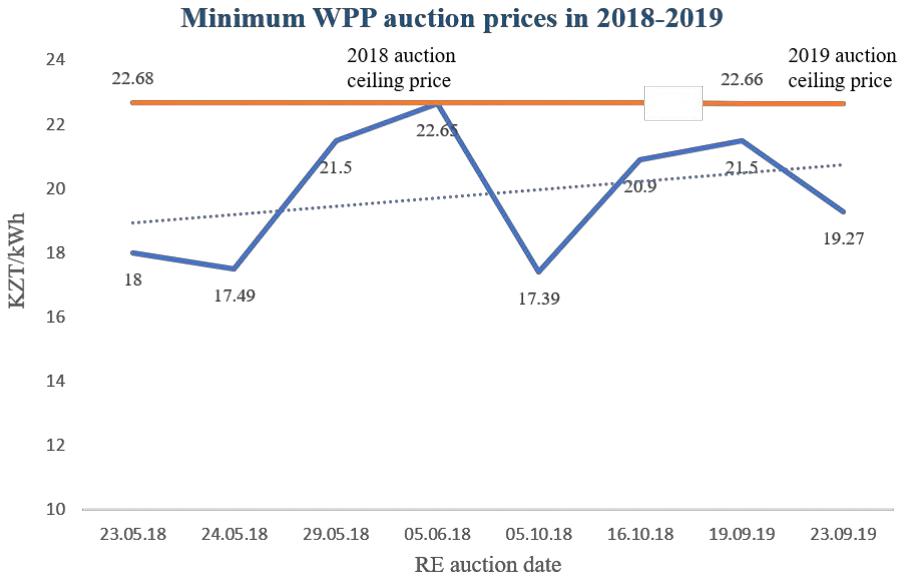

Figure 11. Price dynamics during the 2018-2019 WPP auctions.

In general, Kazakhstan, which has the highest share of inexpensive coal generation facilities, is the first Central Asian country that is actively developing renewable energy and introducing auctions to select RE projects. The successful 2018-2019 auction results show the effectiveness and timeliness of the transition from feed-in tariffs to the auction mechanism, following international best practice.

The introduction of the auction mechanism has made it possible to create competitive conditions, attract international RE investments, reduce the costs of renewable energy generation and partly reduce the financial burden upon end consumers. At the same time, further development of the RE sector requires continued improvement of investment conditions and the resolution of issues related to integration of increased volume of RE into the UES RK.

In this regard, the Government of Kazakhstan is working to further improve regulations concerning RE investments, including the provision for ensuring financial stability of the FSC, improved PPA terms and conditions, integration of RE into the UES RK, support of domestic RE equipment manufacturers, provision of incentives and financial instruments for the development of small-scale RE generation, and other issues.

9. Annexes

Annex 1

Table 1. List of RE auction winners in Kazakhstan, 2018

No.	Auction date	Winner name	Project capacity, MW	Auction price, KZT/kWh	Project type	Project size*
1	23.05.2018	KT Zinchenko&Co.	2	18	WPP	small
2		Vici LLP	7	18.01		
3		Ventum Energy LLP	4.95	18.99		
4		EastWindEnergy LLP	4.95	19.99		
5		Ivan Zenchenko LLP	2	22.53		
6	24.05.2018	ZHEL ELECTRIC LLP	50	17.49	WPP	large
7	29.05.2018	Zhangiz WPP LLP	5	21.5	WPP	small
8		Service WPP LLP	10	21.7		
9	05.06.2018	Alcor Energy LLP	4.95	22.65	WPP	small
10		Vostok Veter LLP	10	22.66		
11	31.05.2018	ZharykEnergo National Energy Company LLP	8.6	12.8	HPP	small
12		Bekzat LLP	7	13.13	HPP	
13		Tolkyn WPP LLP	2	13.68	HPP	
14		Hydroservice LLP	3	15.19	HPP	
15	04.06.2018	Kaz Green Energy LLP	5	32.15	Bio PP	small
16	06.06.2018	URBASOLAR SAS	5	28	SPP	small
17		TechnoBazalt LLP	3	28.99		
18		Hydroenergy Company JSC	10	29		
19	07.06.2018	MISTRAL ENERGY LLP	50	25.8	SPP	large

20	05.10.2018	Zhel Electric LLP	100	17.39	WPP	large
21		Energo Trust LLP	50	19.5		
22		Shokpar Wind Power Plant LLP	50	19.98		
23		Ivesto LLP	50	20.5	WPP	large
24	10.10.2018	KazHydroOperating LLP	13.88	14.85	HPP	large
25		Karatal HPP Cascade LLP	21.6	14.9		
26		Korinsk HPP-2 LLP	26	15.48		
27	16.10.2018	ZHEL ELECTRIC LLP	50	20.9	WPP	large
28		Shokpar Wind Power Plant LLP	100	22.58		
29	17.10.2018	Dala Solar LLP	2	18	SPP	small
30		Hydroenergy Company JSC	10	19.58		
31		DSTO Solar LLP	10	19.6		
32		KK-KIUSEN LLP	10	19.63		
33	18.10.2018	Hydroenergy Company JSC	50	18.6	SPP	large
34		Avelar Solar Technology LLC	20	18.8		
35		Avelar Solar Technology LLC	50	22.5		
36		Shell Kazakhstan B.V. Branch	50	22.9		
	TOTAL:		**857.93**			

**Small project - from 0.1 to 10 MW inclusive, large project - over 10 MW*

Annex 2

Table 2. List of RE auction winners in Kazakhstan, 2019

No.	Auction date	Winner name	Project capacity, MW	Auction price, KZT/kWh	Project type	Project size*
1	16.09.2019	Shet-Merke-Energo LLP	2.5	15.43	HPP	small
2		Zhetisu Zher ABC LLP	4.5	15.48		
3	18.09.2019	Waste Energy Kazakhstan LLP	4	32.13	Bio PP	small
4		ZOR-Biogas LLP	2.4	32.14		
5		GorComTrans of Karaganda City LLP	4	32.15		
6	19.09.2019	Arkalyk Wind Power Plant LLP	10	21.5	WPP	small
7		First Wind Power Plant LLP	4.99	21.61		
8		Arkalyk Wind Power Plant LLP	7	21.69		
9	23.09.2019	Arm Wind LLP	48	19.27	WPP	large
10		Sophiyevsk Wind Power Plant LLP	39	19.33		
11	24.09.2019	Solar System LLP	10.5	9.9	SPP	large
12		KazSolar 50 LLP	26	16.97		
13	27.11.2019	Arm Wind LLP	50	12.49	SPP	large
	TOTAL:		212.89			

** Small project - from 0.1 to 10 MW inclusive, large project -over 10 MW*