



«QAZAQ GREEN»
RES Association

Development of renewable energy sources in Kazakhstan: challenges and potential

November 2023



“Qazaq Green” RES Association



Single Platform for national and international players in renewable energy



Goal – is industry consolidation to bring together actors in the field of renewables in order to create favorable conditions for development of the sector



Mission - formation of a holistic position of association members to obtain attractive conditions for investing in RES projects

Accreditation of association:



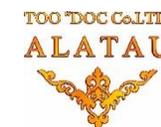
Ministry of Energy of the Republic of Kazakhstan



Ministry of ecology, geology and natural resources of the Republic of Kazakhstan



Members



Accredited observers



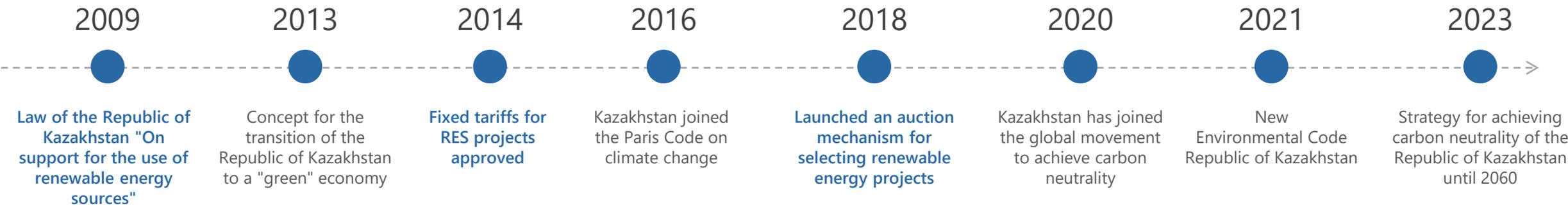
Partners



For more details please visit our web-site www.qazaqgreen.kz

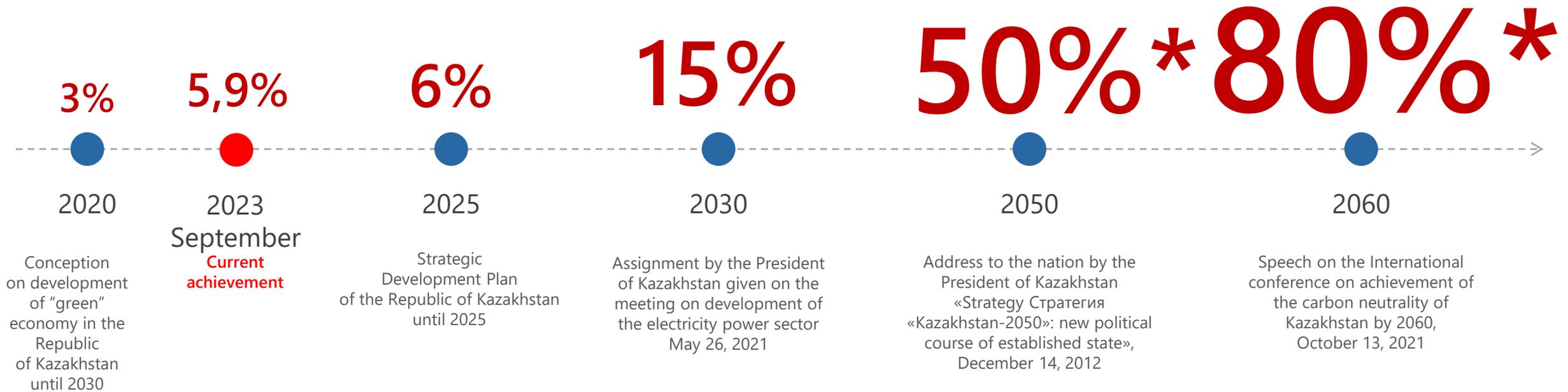
Kazakhstan is progressively developing RES and is committed to international climate commitments

Development of the state policy of the Republic of Kazakhstan on RES and climate



Kazakhstan set an ambitious goals for RES development

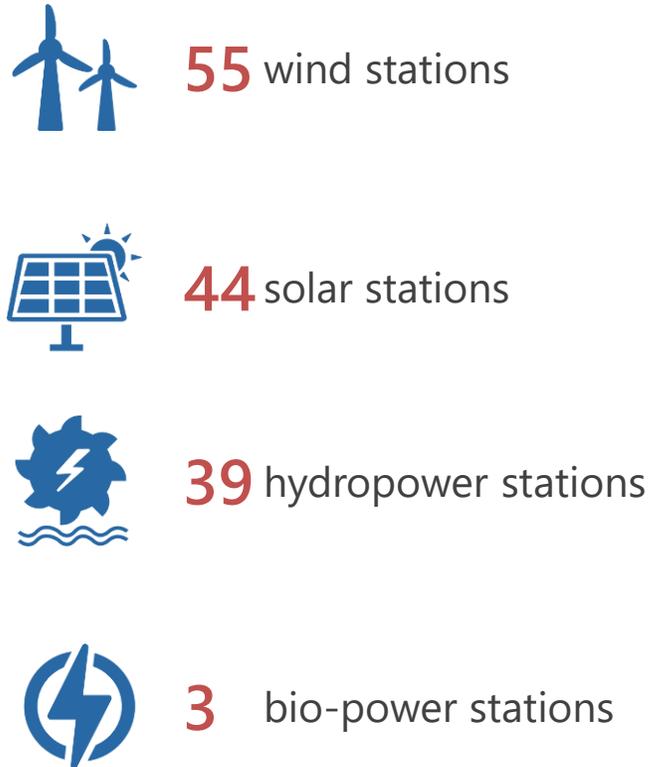
Strategic indicators for share of electricity generated by renewables in total electricity power production



*Renewable energy sources and alternative energy sources

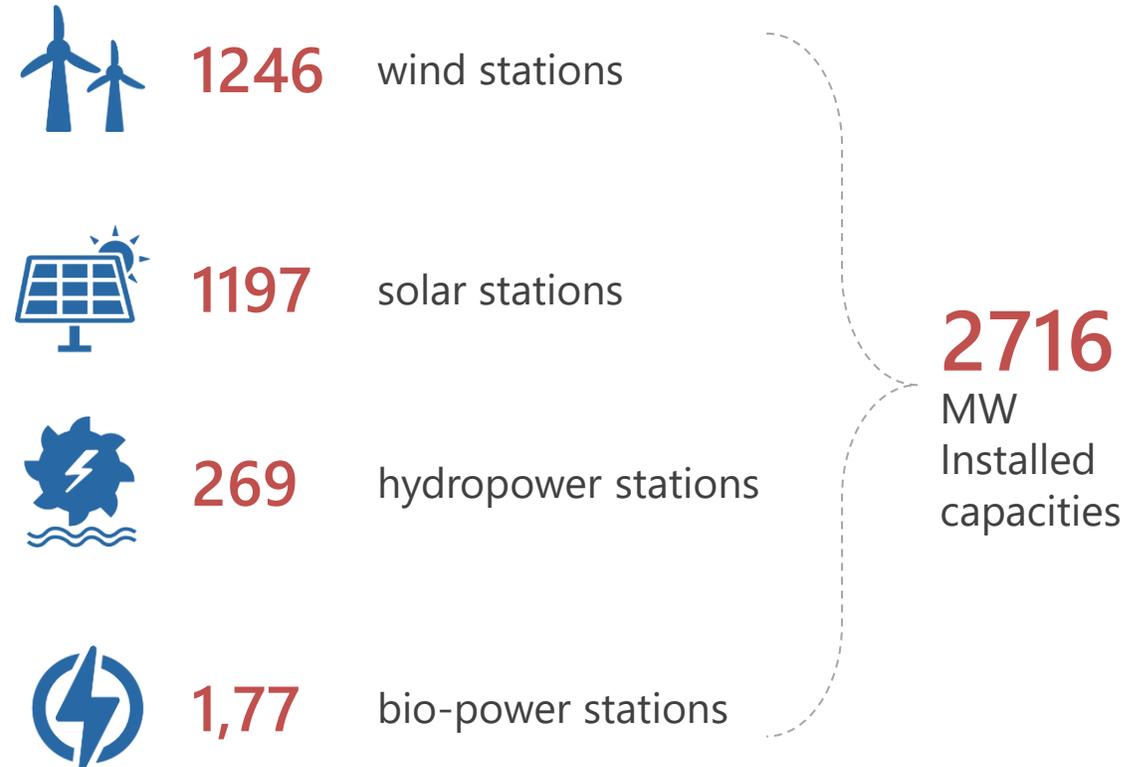
Monitoring of RES development in Kazakhstan

Number of RES stations, 9 month 2023



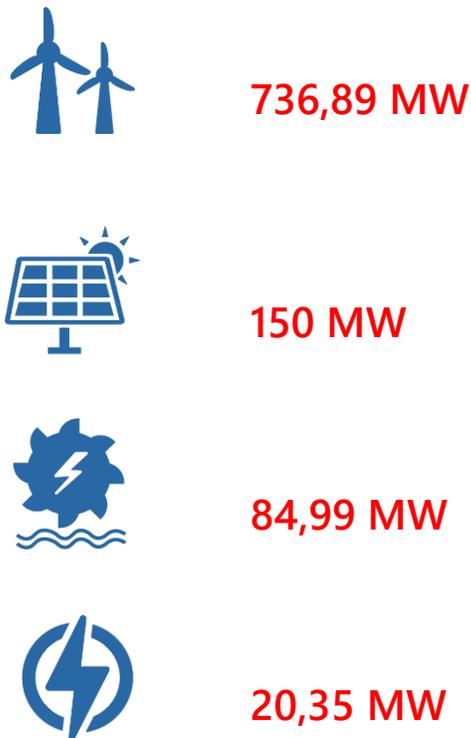
141
renewable
energy
stations

Installed capacities of renewables, 9 month 2023, MW

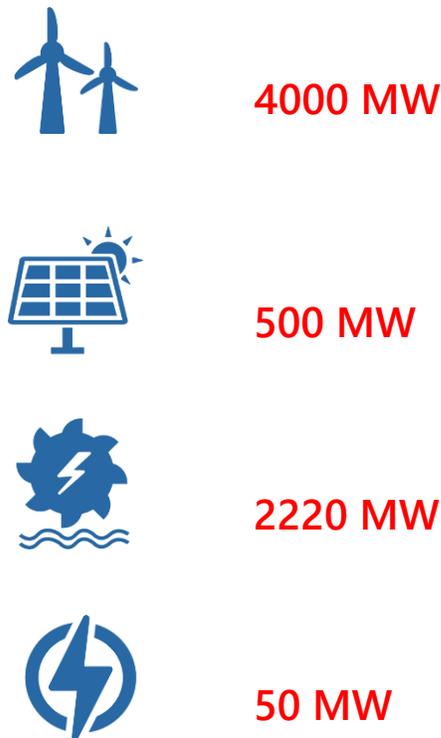


Until 2032 it is planned to commission 13,7 GW of utility-scale renewable energy capacities additionally to existing capacities (2,7 GW)

Capacities of renewables for commissioning based on the signed PPA-contracts on 2023-2026, MW



Capacities of renewables for commissioning based on the Plan of auctions for 2023-2027, MW



Capacities of renewables for commissioning based on signed direct international contracts, MW



Source: Financial-Settlement Center, Ministry of Energy of the Republic of Kazakhstan

According to the signed PPA - 992.2 MW (until 2026), according to the results of the planned auctions - 6770 MW (until 2032), according to the concluded international agreements - 4000 MW

Potential of development of renewables in Kazakhstan



Development of corporate market of renewables

1

After the announcement by the President of the Republic of Kazakhstan of a commitment to achieving carbon neutrality by 2060 in Kazakhstan, many industrial enterprises (oil, mining, IT and telecommunications sectors) have expressed interest in reducing their carbon footprint through the introduction of renewable energy

2

Many companies are actively implementing ESG principles into their corporate policies.



Development of small-scale renewable energy projects

1

The potential of 5-10% of households is equivalent to the construction of a large TPP with a capacity of 500 – 1000 MW

2

Connection to the electric grid of the so-called home installations of solar power plants on the scale of the region will contribute to improving the reliability of the network as a whole, unloading overloaded nodes and reducing electrical energy losses.



Development of hydropower plants projects

Hydropower potential of Kazakhstan

8-9 bln. kWh per year Average output of all HPP

170 bln. kWh per year Hydropower potential

62 bln. kWh per year Technically possible potential

30 bln. kWh per year Economically feasible potential

Key problems:

Lack of a regulatory framework, excessive requirements of the system operator for the implementation of such projects

High cost of installations, lack of government support measures, difficulties with connecting to networks

Difficulties in obtaining land plots, short deadlines for putting projects into operation, low tariffs at auctions



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