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# Kazakhstan energy storage europe 2025

Is Kazakhstan at a crossroads in its energy sector?

Kazakhstan,a vast and resource-rich nation in Central Asia,is at a crossroads in its energy sector. With a growing emphasis on sustainability and a need to align with global decarbonization efforts,the country is embarking on a transformative initiative that aims to ensure the security and reliability of its energy supply.

### How much oil does Kazakhstan produce?

It produces more than twice as much crude oil as Azerbaijan but around half the natural gas produced in Turkmenistan. Kazakhstan's total energy production (178 million tonnesof oil equivalent [Mtoe]in 2018) covers more than twice its energy demand. Kazakhstan is also a major energy exporter.

## Does Kazakhstan need more energy?

As Kazakhstan expands renewables,more investment will be needed flexible capacity such as gas-fired and hydro power plants to accommodate the variability of solar and wind output, the report says. Kazakhstan's system currently relies significantly on electricity imports from Russia to cover imbalances and maintain frequency stability.

## Are energy prices a social concern in Kazakhstan?

The report recognises that energy prices are a significant social concernin Kazakhstan. A rise in prices for liquified gas used in vehicles contributed to the unrest that gripped the country in January 2022. However,low prices have made it difficult to diversify the types of energy used for the domestic market and to promote energy efficiency.

#### Is Kazakhstan a major energy exporter?

Kazakhstan is also a major energy exporter. In 2018, it was the world's 9th-largest exporter of coal, 9th of crude oil and 12th of natural gas. In 2018, Kazakhstan's energy consumption (measured by total primary energy supply) was 76 Mtoe, comparable to consumption in the Netherlands (73 Mtoe).

### What is Kazakhstan's energy mix?

Coalrepresents around half of Kazakhstan's energy mix (50% in 2018), followed by oil and natural gas (both with 25% shares). Coal is mostly transformed into electricity and heat before reaching the final consumer. Coal fuels around 70% of electricity generation (in 2018), followed by natural gas (20% in 2018).

Over the weekend, the Kazakh government, TotalEnergies and Turkey-based Aktas Energy signed an energy pact envisioning 1 gigawatt wind power generator along with a power storage facility in the southern Zhambyl

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embarking on a transformative initiative that aims to ensure the security and reliability of its energy supply.

The economic potential of the country"s RES is 27 GW, including 3,000 MW from wind and 23,000 MW from solar energy. Kazakhstan aims to increase the share of renewable energy in its total power generation to 6% by 2025 and to 10% by 2030. RES should constitute at least half of total energy consumption by 2050.

overview of major energy sectors in Kazakhstan o NER 2023 analyzes key questions facing Kazakhstan's energy sector, such as: - What are the key elements involved in enhancing energy security for Kazakhstan? - How is Kazakhstan's energy sector embracing the energy transition and how is this interacting with energy security?

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Kazakhstan relied on fossil fuels for 87% of its electricity in 2023, falling only slightly from 90% in 2015. Its per capita emissions were more than two and a half times higher than the global average. Kazakhstan"s largest clean electricity source is hydro (8%).

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In 2023-2024, Kazakhstan signed deals with leading energy companies such as Saudi Arabia's ACWA Power, the UAE's Masdar, and France's TotalEnergies, aiming at the construction of 3 GW of wind power capacity with integrated storage systems.

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