

Is solar energy a viable energy source in Kazakhstan?

In 2019, another solar power plant in Kazakhstan, Saran, with a capacity of 100 MW started its operation in the Karaganda region (Satubaldina, 2020). According to the International Energy Agency (IEA), within the period of 40 years, solar energy has a potential to meet about 20-25% of the energy demand of the country.

Can solar power drive Kazakhstan's Energy Transition?

However, Kazakhstan's solar ambitions do not fully tap into its potential, and the technology could play a far larger role in the country's energy transition due to its low cost and flexibility. The focus now is on leveraging solar's comparative advantages to drive forward Kazakhstan's decarbonisation and harness its significant solar resources.

Is Kazakhstan a good place to install solar power plants?

At least 50% of the territory of Kazakhstan is suitable for installing solar power plants (Antonov, 2014). However, up until recently, solar resources of the country were not being used for power generation. Kazakhstan is developing solar energy technologies, namely production of photovoltaic modules using local silicon.

What is Kazakhstan's First Solar power plant?

The plant is to produce solar cells using Kazakhstan's silicon. The designed capacity of photovoltaic wafers is 50 MW with a potential to increase up to 100 MW. In 2012, the first solar power station, "Otar," that generates 0.5 MW of energy, was also built in the Zhambyl region.

Can Kazakhstan produce solar cells using silicon?

As Kazakhstan is rich in silicon (85 million tons), production of silicon solar batteries on the domestic market was started (Sim, 2015). In this light, recently "Astana Solar" plant aimed at the production of photovoltaic modules was launched in Nur-Sultan. The plant is to produce solar cells using Kazakhstan's silicon.

Which part of Kazakhstan receives the most solar radiation?

During the summer months (June - August), due to its geographical location, the southern part of Kazakhstan receives direct solar radiation for the most of the daylight hours which constitute 83 - 96% of the maximum possible value.

Solar power has a great potential as a renewable energy resource due to sparsely populated large areas and the climatic conditions, especially in southern Kazakhstan with an annual sunshine of 2200 to 3000 hours.

6 ???&#0183; This leaves essentially one option for Kazakhstan. They must heavily invest in the construction of renewable power sources like Solar, Wind, and Hydro whether that is through market mechanisms like subsidies or feed in tariffs. In addition, they will have to invest in the construction of carbon-free baseload

generation.

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SolarPower Europe, supported by the Global Solar Council and the Association of Renewable Energy of Kazakhstan (AREK), publishes the second edition of its report on solar investment opportunities in Kazakhstan.

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