

# **Solar panels on Kazakhstan's islands**



## Overview

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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.

Does Kazakhstan have solar energy?

Solar radiation map of Kazakhstan Source: The World Bank, 2019. The largest Central Asian country, Kazakhstan, has a great potential of solar energy. The amount of solar radiation is 1300-1800 kWh per square meter per year (CaRNet, n.d.) (Figure 1). Annual potential of solar energy is estimated to reach 2.5 billion kWh.

Why is Kazakhstan developing solar energy technologies?

Kazakhstan is developing solar energy technologies, namely production of photovoltaic modules using local silicon. As Kazakhstan is rich in silicon (85 million tons), production of silicon solar batteries on the domestic market was started (Sim, 2015).

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.

What is Astana solar?

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. The designed capacity of photovoltaic wafers is 50 MW with a potential to increase up to 100 MW.

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