

## **How Russia puts on hold its renewables sector to accelerate the global energy transition**

Russia has always regarded energy transition as a threat to its economic growth discussing it only within the context of foreign policy. Last two years have seen a slight change with Russia ratifying the Paris agreement, setting a goal of carbon neutrality by 2060 and starting the experiment of achieving carbon neutrality in Sakhalin region by the end of 2025 that could be followed by other regions and could lead to the introduction of a national emissions trading system (ETS). All those goals were mere formalities – Russian first nationally determined contribution (NDC) to the Paris agreement implementation envisaged a significant increase in emissions up to 2030, carbon neutrality was planned to be achieved by 2060 mostly through forest sequestration and a national ETS if ever introduced would likely end up with extremely low prices. Renewable energy sources (RES) were given a very modest place – the existing RES support programs would allow to generate no more than 3% of Russia's electricity using solar PV and wind by 2035 while already now these two technologies are providing for over 10% of global electric power.

Almost all Russian solar PV and wind power plants have been built for the wholesale electric power and capacity market, after 2013, when the national RES government support system at this market was put into action. By now, 3.6 GW of wholesale solar PV and wind power plants have been commissioned corresponding to 1.5% of the total installed capacity and 0.6% of Russian power generation. At retail electric power markets, renewables were much less successful due to the lack of payback guarantees.

For a long time, renewables remained too expensive for Russia given the abundant cheap conventional electric power and the country's limited experience in the RES field. However, they were gradually becoming more competitive even in Russia, and by the beginning of the Russia's war on Ukraine, power of new solar PV and wind plants was comparable in price to the power supplied by new coal and natural gas plants, and by 2025, wind power was to become cheaper than today's wholesale electric power prices.

After the outbreak of the war, further RES development in Russia became problematic. Two out of three Russian wind power market players – Finnish Fortum and Italian Enel – have stopped their new investment projects with Enel intending to leave the country within a few months. Danish Vestas, which has been producing wind blades in Russia for Fortum projects, also intends to withdraw. This year solar PV and wind tenders were cancelled with the probability of their cancellation in 2023 as well. Many existing and potential corporate buyers of renewable energy in Russia have frozen their activities or have already decided to leave. Large energy-intensive consumers of electric power have asked the Ministry of Energy to abandon the RES state support programme. The I-REC Standard has suspended its work in Russia. All these events set Russian renewables sector back many years.

Starting from March 2021, prosumer microgeneration (household rooftop solar PV, commercial micro solar PV plants, etc.) is also possible in Russia with the supply of excess electricity to the grid. However, due to the complicated procedure for connecting to the grid and due to low prices for the fed-in renewable energy, up to now only about 50 prosumers have connected. Apart from this, starting from July 2022, the cost of connecting to the grid for microgenerators significantly increased, which makes further prosumer RES power supplies to the grid practically impossible. At the moment, the connection of microgenerating facilities to the grid is up to 82 times more expensive than before July, and by 2024, it will become up to 136 times more expensive. At the

same time, microgeneration itself in Russia will most likely be in demand in the near future as a way to protect against instability, but, as before, in an autonomous mode.

Russia is already trying to reorient its economic ties towards the East. However, it will be difficult to attract investment and technologies from the East (unlike trading in discounted fossil fuels) if the war goes on. Apart from logistical, financial and regulatory constraints, there are also reputational risks that major Asian companies will hardly bear for the sake of getting a grip on the tiny Russian RES market. A simple fact: the installed capacity of solar PV and wind power in China in 2021 was 635 GW, which is almost 40 times higher than Russia will install by 2035 if its existing plans are carried out.

Thus, any serious talk on the continuation of Russia's RES sector development requires the end of war. But recent tragic events definitely give a momentum to the global and especially European energy transition and independence. First, through skyrocketing prices for fossil fuels which make renewable energy even more competitive. Second, through increased energy efficiency and energy savings that will result from expensive oil and gas. Third, through weaker willingness of many energy importers to deal with volatile and geopolitically dependent fossil fuels.