

Russia's slow road to an energy revolution

Russia is a latecomer to renewables, but change is starting to happen, the head of the country's Sustainable Energy Development Centre tells Timothy Spence

RUSSIA

WHAT:

Renewables is finally gaining serious government support and funding in Russia

WHY:

The government sees green energy as way to provide reliable power supplies in remote regions

WHAT NEXT:

The new renewable target is 3% by 2024, down from the original 4.5%

RUSSIA has scrapped plans to generate 4.5% of its electricity from renewables by 2020 in favour of a far more modest 3% target. Yet even this may not be achieved for at least a decade, and possibly longer if the country's economic woes drag on.

But renewable energy in the energy-rich country has been forgotten. With barely 1% of today's electricity coming from alternative sources, Russia is focusing its limited resources where it could have the most immediate impact: remote regions that are not beyond the reach of the country's national grid.

The government recently approved more than 70 renewable energy projects, valued at 110 billion rubles (US\$1.7 billion), in 24 remote areas. These include solar, wind and small-scale hydro, and are due to for completion in 2018.

The projects mark the second phase of government spending after a 2013 law was passed to boost investment in the nascent renewables industry.

Internationally, Russia has also upped its profile by joining the International Renewable Energy Agency (IRENA).

"There is a growing understanding by policymakers in Russia that the transition to decarbonisation will depend on the development of renewables," Yury Posysaev, executive director of the Sustainable Energy Development Centre, a Moscow think-tank, told the World Science Forum in Budapest on November 6.

Speaking to *NewsBase*, he acknowledged that missing the 4.5% target set by the country's 2009 energy strategy was a setback, admitting that even the 4.5% goal was "not nearly enough in terms of the whole energy balance of the country.

"But it was already some progress, because before this it was only less than 1%," he added, referring to the production of power mainly from small-scale hydro.

He conceded that the energy ministry's reduction of the target to 3% in 2024 was realistic.

"Time has shown that to achieve such accelerated pace of overall increase in the share of renewable energy sources in the energy balance of the country was unachievable," said Posysaev, who has also worked as an advisor to state-run RusHydro.

Under the revamped outlook, renewables

generation is to rise from 700 MW today to 6,000 MW by 2024, well short of the 25,000-MW target anticipated under the 2009 energy strategy.

Small-scale hydro still accounts for most green generation today, while geothermal production amounts to 80 MW and wind 13 MW.

Russia's current installed power capacity is 234,000 MW, of which 70% is derived from fossil fuels and 20% from large hydro, while nuclear accounts for 10%, according to the International Energy Agency (IEA). Russia needs to expand capacity by at least 20,000 MW to meet short-term growth demand, the IEA estimates.

Investing in remote areas

One of the pressing challenges is improving reliability in some of Russia's remote region, such as the North Caucasus.

The decision to focus on using renewables for these areas makes sense – the cost of generating electricity from traditional fuels is up to five times higher than the world average in these regions, Posysaev explained.

"Renewable energy sources are indeed more competitive due to the high cost of imported fuel and problems with delivery," he told said.

Many of the 76 recently approved Russian renewables projects are in eastern Kamchatka Peninsula, the Kuril Islands, Siberia's Altai region and Krasnodar region in the North Caucasus. The projects are to be completed by 2018.

A difficult road

The Moscow sustainability centre was founded in 2008 and its board comprises influential policymakers, including the energy minister Alexander Novak and Anatoly Tikhonov, who heads the state energy agency.

President Vladimir Putin has thrown his support behind decarbonising the economy of the world's third largest oil producer. However, in a speech before the UN General Assembly in September, he appeared to distance himself from binding measures, instead calling for "new, ground-breaking" technologies to address resource depletion and climate change.

Russia's road to such a transformation is likely to be a difficult one. For one thing, the country's economy has been battered by the slump in oil



Yury Posysaev, executive director of the Sustainable Energy Development Centre

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Wind farm in Russia
Source: TASS

- prices, depressed gas revenue and international sanctions. The economy is due to contract by 3.8% this year and fall by 0.6% in 2016, the IMF reported in October.

Government finances are vulnerable to unstable commodity prices, and an immediate recovery seems unlikely with a cocktail of other challenges that include a weak ruble, high inflation, a record slump in consumer spending and a surge in poverty.

'Overly ambitious' energy projections

"Even the [energy] ministry's revised renewables numbers are probably overly ambitious under current circumstances," said one European researcher who listened to Posysaev's speech at the World Science Forum.

"For the foreseeable future, Russia will have to rely on imported technology, and if the current political and economic problems carry forward, this is not going to be easy for renewable energy or any other Russian industry, for that matter," said the scientist, who spoke on condition of anonymity, citing his work with Russian universities and research institutions.

"That's not to say there isn't potential ... Russia has a tremendous opportunity in solar because of its industrial capacity to produce silicon," he went on.

There is also no shortage of capital available for investment in renewables. What is needed is the political will to reduce support for traditional fuels such as coal and natural gas.

Russia provides more than US\$40 billion per year, or 2.2% of GDP, in direct subsidies for its power and gas sectors, figures from the IEA and the OECD show.

Support for renewables pales by comparison. After the 2013 law, known as Decree 449, was adopted, Deputy Prime Minister Arkady Dvorkovich estimated that support for renewables would amount to 100 million rubles (US\$1.5 billion) per year.

Moscow is also not following the example of its European neighbours in using feed-in tariffs (FiTs) and other support linked to output, choosing instead mandates linked to capacity supply.

Besides baffling would-be investors, the system "raises specific regulatory challenges related to the volatility of the output of wind energy, solar PV and small hydropower plants [HPPs]," said an International Finance Corporation (IFC) assessment of the law.

International co-operation on renewables

Hurdles aside, Posysaev believes Russia's domestic market will gain through his centre's involvement in UNESCO and its co-operation in helping to train energy professionals from Africa, Asia, the CIS and other regions.

The country's new status as a member of IRENA is another asset. "We believe that such membership creates some good opportunities for the countries, especially in terms of exchanging experiences and such issues as access to new technologies, as well as participation and development of international standards," he explained.

But he hesitated when asked if Russia would one day be known as much for its trade in renewable power as for its gas and oil exports.

"Now and for the longer term, we maybe should not think about being the exporters but how to develop it inside the country to provide some regions that really need these sources, and to develop this industry in our country," Posysaev said. "Then after that, we can start thinking about going outside the country."

Russia is a late convert to renewables, with the Kremlin only really getting serious in 2013.

NewsBase believes that doubts about the country's technical abilities, together with a complex support system that is vulnerable to government whims, mean that green energy is likely to remain a minor and relatively unimportant part of Russia's energy sector. ❖

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