How Putin is using uranium to threaten Western energy supplies

Fragile global supply chains are being pushed to the brink as tensions with Russia mount

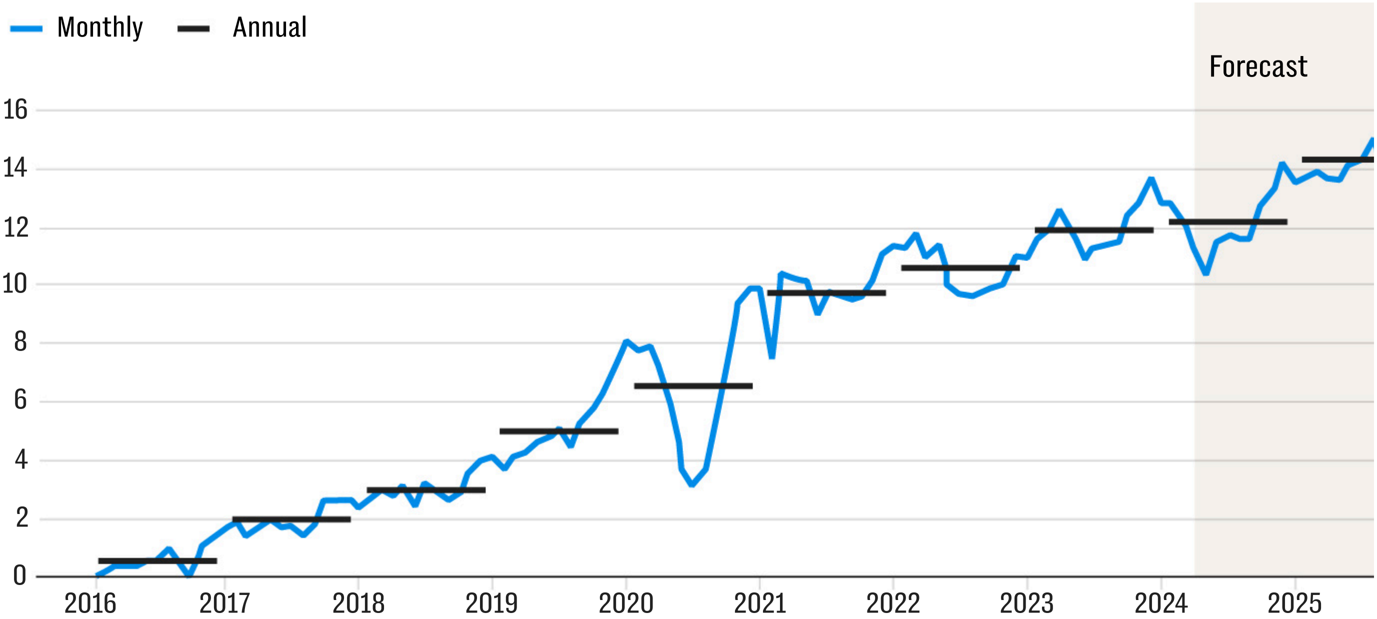
Matt Oliver
Industry Editor
19 November 2024 7:00am GMT

Europe is grimly familiar with Vladimir Putin's willingness to weaponise energy, after the Russian leader choked off gas supplies and sent winter heating prices soaring.

It is a decision that has hardly been felt in oil and gas-rich America, where domestic production is ample enough to cover all of the country's needs – and help Europe through exports of fuel.

American liquefied natural gas exports have surged

Average exports per day, billion cubic feet



US Energy Information Administration

Now, however, Russia may be reaching for an energy weapon it has previously been reluctant to use – nuclear fuel that keeps the lights on in millions of US households.

On Friday, the Kremlin said it was imposing temporary restrictions on exports of enriched uranium to the US. The exact timing and duration of the measures was not made immediately clear.

US nuclear power plant operators rely on Russia for more than a quarter of their supplies – a legacy of the post-Cold War "megatons to megawatts program" that saw Moscow agree to convert large parts of its vast nuclear weapons stockpile into fuel.

Industry sources stressed that the impact of Russia's export ban will not be felt immediately because orders are placed well in advance.

Still, the move has the potential to cause havoc in the relatively fragile global uranium supply chain. Russia is the world's sixth biggest uranium producer and controls about 44pc of global enrichment capacity, making it a key international player.

This is why the country's state nuclear company, Rosatom, for so long escaped western sanctions related to the Ukraine conflict. Thanks to this, Russia still generates about $3.1bn (£2.4bn) a year from nuclear exports, including $905m from exports to the US, according to trade data first reported by Tortoise.

American law makers took a first step to remedy the situation in May, when they passed a bill requiring imports of Russian uranium to stop from August. However, the bill included significant exemptions that allow US utilities to carry on importing the Russian supplies until 2027 to avoid supply shortages.

Experts say the decree announced by Moscow on Friday at the very least appears to mirror those restrictions, suggesting that exports to the US could still continue. Earlier this month, on the eve of the Russian ban, US nuclear giant Westinghouse received a shipment of enriched uranium via an ARRC Line tanker, according to Russian media.

And on Monday, Rosatom said exports to the US would “continue unchanged” to customers with contracts for the time being.

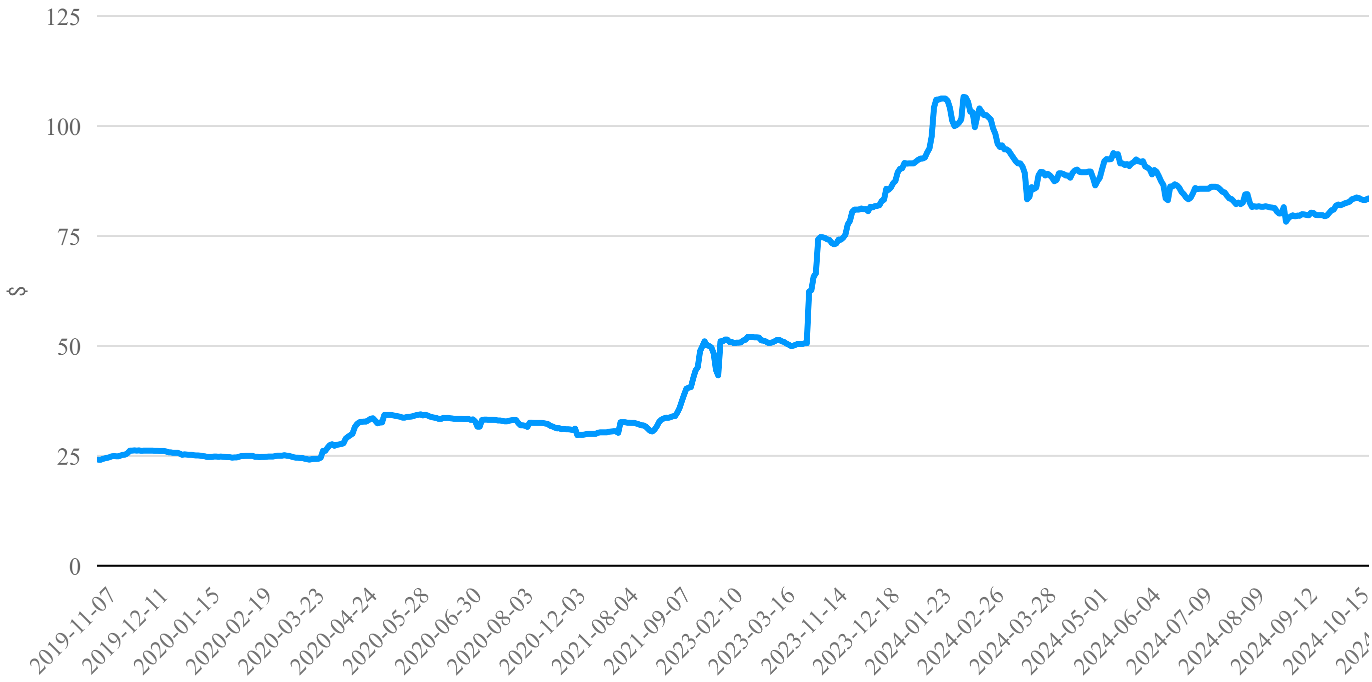
But there are fears that Putin’s latest move opens the door to changes that go beyond symbolic tit-for-tat measures.

Some analysts believe it could soon lead to a “Cigar Lake moment”, a reference to the flooding of a mine run by Canadian giant Cameco in 2006 that sent uranium prices surging.

There were early signs of this on Monday as the spot price for raw uranium surged from the one-year low of $76.50 per pound to $82.

Uranium price is rising again

Spot price



Source: Bloomberg

Ocean Wall, a uranium-focused consultancy and broker based in London, told clients over the weekend: “The US is facing at least a one year ban on Russian imports.”

It pointed to translated remarks by Andrei Listovsky, director of the country’s energy development fund, who told Russian media on Friday that the move had both political and economic goals.

“The political goal is to not sell strategically important resources to unfriendly countries, including the United States,” he said.

“The economic goal is to save more of the valuable resource for those countries that are ready to work with Russia.”

He suggested that Moscow may instead focus on exports to India, Iran and China, where Rosatom has or is building new nuclear reactors.

Whether that is simple bluster remains unclear for now. However, Russia has previously shown itself willing to tear up agreements with countries over disputes, with Moscow cutting off gas supplies to Austria last week following a row over payments.

Most deliveries of enriched uranium to the US this year will have already happened, but the move could affect shipments next year, uranium analyst Jonathan Hinze, at UxC, told Bloomberg.

"There would be some utilities that would be expecting that material and now might not get it," he added.

Nick Lawson, Ocean Wall's co-founder, says a closer relationship between incoming US president Donald Trump and Putin may not be enough to patch things up.

"You have this hiatus period of uncertainty," he says. "Even if Donald Trump came out and said 'we're best friends with the Russians again', the nuclear fuel chain is so fragile and it's been broken at two points: UF6 and EUP."

A closer relationship between incoming US president Donald Trump and Putin may not be enough to patch things up
Credit: YURI KADOBNOV/AFP

UF6, or uranium hexafluoride (also known as "hex"), is the compound that is converted into "enriched uranium product" (EUP). Supplies of both globally are now looking constrained when compared to expected future demand, Mr Lawson argues.

An agreement was struck by Britain, the US, Canada, Japan and France to work together on civil nuclear fuel production in December 2023 but progress to increase enrichment capacity has been particularly slow.

The only such facility in the US is run by Europe's Urenco. The facility supplies one third of enriched uranium used in American reactors currently and is undergoing an expansion that will boost its capacity by a further 15pc.

An industry source says supplier stockpiles of enriched uranium are likely big enough to absorb the loss of Russian supplies in a worst-case scenario – for now at least.

However, the situation has highlighted the extent to which western countries are still heavily dependent on Moscow for a crucial resource.

Canada-based Cameco, one of the world's biggest uranium miners, said: "To break the dependence on Russia and other state-owned enterprises, coordinated western responses are required."

Ocean Wall's Lawson warns: "The uranium supply chain, even when world trade was at its most liberal, agreeable level, was fragile.

"With what's happened in the last few years, that has completely broken down – so it's a very nervous situation."

Matt Oliver
Industry Editor

19 November 2024 7:00am GMT