Russia is expected to eventually begin producing the equivalent of a third of the world's current helium production from a massive gas plant in its Far East, but with Western nations cutting off the country's financial flows over its invasion of Ukraine, experts worry that gas won't reach the global market.

"The world is going to need the new supply from Russia or others to come into the market," said Phil Kornbluth, a consultant with decades of experience in the helium industry.
While there's no telling how long the country will face sanctions, "If they leave them in place for a long period of time, it's going to be tough to do business with Russia," Kornbluth said.

An inert gas that is used to inflate balloons, liquified to cool magnetic resonance imaging scanners and was once deployed on space shuttle missions, helium is also used in the manufacturing of semiconductors, which are running in short supply worldwide.

Rich Gottwald, president and CEO of the US-based Compressed Gas Association industry group, said companies that rely on the gas are today unable to get as much as they need.

"They're starting to feel the pinch of not having enough helium for their business," he said.

'Fragile' supply chain

The scarcity comes as supply chains worldwide have yet to recover from the Covid-19 pandemic, which have led to massive order backlogs, delivery delays and shortages of workers and raw materials.

A byproduct of natural gas production, only a handful of countries produce helium, creating a supply chain that Kornbluth described as fragile and prone to shortages whenever production is disrupted.

The top producer is the United States, which runs the Federal Helium System, a massive reserve and enrichment facility in Amarillo, Texas.

But instead of solving the gas shortage, that facility has become the epicenter of it. It is in the process of being sold off to private companies, and was shut down last July amid safety concerns. As of Thursday, it remains
offline, according to a public status report.

Initially, companies hoped that Russia's Amur Gas Processing Plant, built by the energy giant Gazprom and capable of producing 60 million cubic meters of helium per-year as well as tens of billions of tons of natural gas, would fill in the gap.

But it only produced for a short period of time last year amid media reports of a shutdown following a fire, and another earlier this year.

**Phone's ringing**

The United States and Europe have now taken drastic steps against Russia over the invasion of Ukraine, including by cutting its banks off from the SWIFT financial messaging system.

If they last long enough, the measures could disrupt helium contracts, and more immediately, keep foreign experts from helping resolve the issues at the Amur plant, and stop helium produced at another Gazprom facility in Russia from reaching Europe, Kornbluth said.

Gottwald said companies' hopes of getting access to the Russian helium supply have already been dashed.

"A lot of people were saying Russia is coming on and they'll fill the void of what's not going to come from Amarillo anymore, but that's going to be very complicated now," he said.

The scramble for helium could increase business for small-scale producers who make up only a minority of the world's gas supply.

"Our phone's been ringing off the hook," said Nick Snyder, chairman and CEO of North American Helium, which produces from two facilities in
Canada, and predicted the sanctions could permanently chill demand for Russia's supply of the gas.

"I don't see the major end users ever forgetting what's happened here in terms of how they view that supply," he said.

© 2022 AFP