



# ARE WE EXPERIENCING HELIUM SHORTAGE 4.0?

---

The expected boost in Helium production from the Amur helium plant in Russia, which was supposed to shore up supply during the US Bureau of Land Management's (BLM's) crude helium enrichment unit during its extended four-month maintenance outage, has been delayed.

Could this spell a new helium shortage?

## Causes of the Shortage

This is quite a departure from what most would have predicted even a month ago. Gazprom's Amur project was expected to supply large quantities of helium to the market by Q4 of 2021. However, after producing helium for a few weeks in September, the project had to pause to allow construction to finish.

Unfortunately, while Amur was shut down, the natural gas processing plants that produce the feed gas for one of Amur's three helium plants experienced multiple fires, delaying Amur's helium production until at least Q3 of 2022 – some pessimistic predictions claim it could be as late as 2023.

## Severity of the Shortage

Amur's shutdown, coupled with planned maintenance in Qatar during February and March reducing production and the longer-than-planned maintenance in the US, has led to several of the helium majors rationing supply to their customers.

Even when production in the US and Qatar return to normal, helium supply will likely remain insufficient to meet demand until Amur is able to contribute to the market. With no other projects in the pipeline, there seems to be no relief in sight until Amur ramps up production again.

## Short-Term Factors

Despite concerns, the crisis in Ukraine should have a fairly minimal impact on the global helium supply. Ukraine does not produce any Helium, and Russia currently operates a small plant in Orenburg that mainly sells within Russia. The relatively small amount of helium sold to other countries will simply shift to supplying countries not observing sanctions.

It is important to note that, thus far, Gazprom and Russia's natural gas exports have not been included in the sanctions, and it is not yet clear if helium exports

will be subject to similar sanctions to oil and gas. Even if this is the case, there is no telling how long these sanctions will be in place, and if it will impact the performance of those SPAs.

However, the over 100 empty 11,000 gallon containers in Gazprom's Helium Hub near Vladivostok that were ready to be filled when the Amur plant experienced an explosion and fire on 5th January this year will have a noticeable impact in the short term. While many of these containers have left Russia, a significant number still remain in the country.

## Expected Duration of the Shortage

Similar to Helium Shortages 2.0 and 3.0, the current shortage is due to a reduction in supply rather than an increase in demand; recurring shortages and high prices have meant that demand hasn't increased at all in the past 10 years.

In hindsight, Helium Shortage 4.0 started when BLM's 4-month outage did, back in July 2021. Since the shortage will likely continue throughout 2022 and possibly even into 2023, the duration will be roughly 18-24 months.

Adapted from: Phil Kornbluth,  
President of Kornbluth Helium Consulting

# VACUUM ENGINEERING

## CONTACT DETAILS

---

### Vacuum Engineering Services (UK) Ltd.

St Modwen Road  
Trafford Park  
Manchester  
M32 0ZE  
UK

**T:** +44 161 866 8860  
[sales@vac-eng.com](mailto:sales@vac-eng.com)

### Vacuum Engineering Services Europe

Ruprechtická 732/8  
Staré Město  
460 01 Liberec 1  
Czech Republic

**T:** +420 602 118 280  
[salesEU@vac-eng.com](mailto:salesEU@vac-eng.com)

### Vacuum Engineering Services (USA) Inc.

3901 Bestech Dr. Suite/Unit 300  
Ypsilanti  
MI 48197  
USA

**T:** +1 724 340 6085  
[salesUSA@vac-eng.com](mailto:salesUSA@vac-eng.com)

### Vacuum Engineering Services Fugani de Mexico

Carretera Estatal 431 KM1.3  
Bodega 26S  
Conjunto industrial PKCo El Marqués  
Querétaro 76246  
Mexico

**T:** +52 442 402 1122  
[proyectos@vac-eng.com](mailto:proyectos@vac-eng.com)



[www.vac-eng.com](http://www.vac-eng.com)