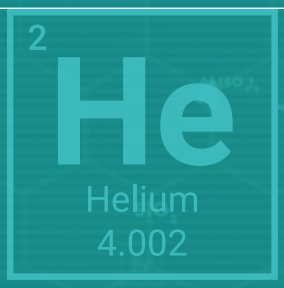
# The helium shortage

## Shows signs of easing

By **Phil Kornbluth**




Although there were a handful of other contributing factors, most helium market observers would peg the beginning of Helium Shortage 4.0 to the start of an extended outage of the US Bureau of Land Management's (BLM) Crude Helium Enrichment Unit (CHEU) back in mid-January 2022.

While Helium Shortage 4.0 remains in place as of early September and now exceeds 19 months in duration, we are starting to see clear indications that it is finally subsiding.

While supply allocations remain in place at three of the five helium majors, allocation percentages have increased for most demand sectors – in some cases all the way to 100%. We should note, at the same time, that an allocation rate of 100% is not an "all clear" signal, as customers are restricted to purchasing 100% of the quantity of helium that they purchased during a specified prior period. Allocation percentages vary from one supplier to another, depending on the strength of their supply portfolios.

What's behind the easing? The situation is less severe for several reasons, including more reliable operations at the BLM since Messer took over responsibility for operating the CHEU midway through 2022, and the lesser impact from maintenance outages in 2023 compared with 2022. There are also modest contributions from new sources and some reduction in demand, primarily from the electronics industry.

It is difficult to quantify the precise magnitude of the remaining supply deficit, but my consultancy KHeC estimates that it might be as low as 5% to 10% industry-wide.

A maintenance outage at ExxonMobil's Shute Creek, Wyoming (USA) plant during July and August temporarily increased the supply deficit by an additional 20%-plus, but the helium market seems to have absorbed the impact of this hit without much of a ripple. That would indicate that helium suppliers were able to build inventory in advance of ExxonMobil's outage, and so move to mitigate its impact. With the Shute Creek plant having returned to normal operation by mid-August, the easing trend for Helium Shortage 4.0 should resume during Q4 of this year.

KHeC believes that the temporary slump in demand from the electronics market has played a significant role in the easing of the shortage. Using very rough estimates, if demand for chip manufacturing accounts for close to 20% of total helium demand, and chip production is off by close to 20%, overall helium demand could be down by up to 4% (a fifth of 20% being 4%) due to the slump in electronics. With a relatively modest supply deficit, a 3% to 4% reduction in demand is very helpful in terms of moving the market back toward a tight balance.

Markets where helium demand is heavily weighted toward the electronics industry, including China, Korea and Taiwan, have seen a much larger percentage reduction in demand and are

actually experiencing an oversupply of helium at this time. Helium demand has also been impacted by the overall weakness of the Chinese economy, as well as probable demand destruction due to the steep price increases experienced during Helium Shortage 4.0.

While helium contract prices are still trending upward in the US and Europe, albeit at a slower rate than previously and showing recent signs of plateauing, prices in China have experienced a significant decline.

Spot prices for helium have also softened somewhat, as more loads have been available in recent months and fewer buyers are willing to pay high prices. The premium for spot loads has shrunk significantly during the last few months and the spot market has become shallower than it was previously.

The shortage has also eased despite the fact that Gazprom's Amur Project had still not commenced production by the end of August. The most recent information from Gazprom, updated for this article as we went to press on September 11, is that Gazprom has now finally commenced filling helium containers, with supplies starting on September 5.

While there is still considerable uncertainty about how fast helium deliveries will ramp up from Amur from here, and how deliveries will be impacted by sanctions or restrictions on the use of US-manufactured containers, significant deliveries from Amur could finally restore a tight balance between supply and demand and formally bring Helium Shortage 4.0 to an end either late this year or early in 2024.

Helium sourced from Russia will likely be discounted due to concerns about sanctions and difficult logistics and this could have a moderating impact on price, especially in China and in other Asian markets where it will not be restricted by sanctions. gw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