Is There a Helium Shortage?

written by Jack Lifton | July 13, 2026

“Helium is not geologically scarce; competence is. As usual, we have confused owning a resource with knowing how to supply it.” – Jack Lifton, Co-Chair, Critical Minerals Institute (CMI)

Yes. As of mid-2026, there is a genuine global helium shortage. It is not simply a price spike or localized distribution problem; it is the result of a structural disruption to one of the world’s largest sources of helium, combined with the already concentrated nature of global helium production.

The issue is particularly important because helium is not manufactured. It is the lightest “inert” chemical element; under any but the most extreme conditions, it does not react chemically with any other chemical element. Commercial helium is recovered almost entirely as a by-product of natural gas production from a relatively small number of gas fields that contain economically recoverable concentrations of helium. If those gas fields or processing facilities go offline, there is no practical substitute.

Why is There a Shortage?

The immediate causes are the disruption of Qatar’s helium production following the conflict with Iran and damage to infrastructure associated with Qatar’s LNG industry. Qatar normally supplies roughly one-third of the world’s commercial helium. When that production was interrupted, the market shifted from a modest surplus to a significant deficit. Prices have risen sharply, and many industrial users have been placed on allocation.

Compounding the problem:

- Helium production is concentrated in very few countries.
- It is expensive and time-consuming to bring new helium production online.
- Liquid helium requires specialized transportation equipment that is itself in limited supply.
- Unlike oil, there is no large strategic global inventory that can quickly stabilize markets.

How Does this Affect the United States?

The United States is actually in a stronger position than most countries because it remains one of the world's largest helium producers and possesses substantial geological resources. The U.S. Geological Survey estimates that hundreds of billions of cubic feet of recoverable helium remain in U.S. reservoirs.

However, that does **not** make the United States immune. Several consequences are already emerging.

Helium is indispensable for many semiconductor fabrication processes: cooling, leak detection, plasma processing, and advanced lithography. Without helium, many fabrication steps simply cannot be performed economically. This has become one of the most significant industrial concerns arising from the shortage.

For Medical imaging, MRI magnets require liquid helium to remain superconducting. Modern MRI systems consume much less helium than older designs because of recycling and improved cryostats, but hospitals still depend upon reliable helium supplies for maintenance and occasional refills. A prolonged shortage raises operating costs and can delay repairs.

For Defense and aerospace, Helium is used in: rocket propulsion systems, satellite manufacturing, military optics, leak testing, and nuclear programs. These sectors receive priority during shortages, but costs still rise.

In Scientific research, Universities and national laboratories are often among the first to experience supply reductions because distributors prioritize medical and defense customers.

Didn’t the U.S. have a strategic helium reserve?

Yes.

For decades the United States maintained the Federal Helium Reserve near Amarillo, Texas. It acted as a buffer against precisely this type of market disruption. Beginning in the late 1990s, Congress directed that the reserve be privatized and eventually sold off. Today, that strategic cushion is effectively gone, leaving the market more dependent on private inventories and commercial production.

Could this create an investment opportunity? It certainly could, but investors should distinguish between **helium exploration** and **helium production**. Many companies claim to have helium discoveries. Far fewer possess proven helium-bearing reservoirs, purification capability, transportation contracts, or long-term industrial customers.

As with rare earths, geology alone is not enough. This observation may sound familiar because it mirrors a point you have made repeatedly about critical minerals: **a mineral deposit is not a business.** The economic value lies in producing a qualified industrial product that OEMs are willing to buy under long-term contracts.

Helium is arguably an even clearer example than rare earths

because industrial users purchase reliability of supply rather than simply molecules of helium.

My Assessment.

From an industrial perspective, I think the helium market illustrates a broader lesson about critical materials.

Helium is not scarce in the geological sense. It is scarce because economically recoverable production is concentrated in a handful of facilities, and the market lacks sufficient redundancy. When one major producer disappears, prices rise immediately because demand is highly inelastic.

The United States possesses abundant helium resources and significant production capacity, but it no longer has the strategic inventory that once insulated domestic industry from global disruptions. As a result, U.S. manufacturers remain exposed to international geopolitical events even though much of the underlying resource base is domestic.

That makes helium an excellent case study in the difference between **resource security** and **supply-chain security**—a distinction that also lies at the heart of today’s debates over rare earths, critical minerals, and industrial resilience.