

Ruthenium Prices Double as AI Storage Demand Meets Limited Supply

written by Tracy Hughes | October 21, 2026

Ruthenium has more than doubled in price over the past year, bringing a little-known ingredient in data storage into the critical minerals discussion. [Critical Minerals Platform \(CMP\)](#) reports a 109.43% increase to US\$1,780.14 per troy ounce as of October 13, 2026. Its assessment covers 99.95% ruthenium on a global free-on-board basis, and CMP currently rates the metal's physical supply risk as High.

Ruthenium belongs to the platinum group metals, a family that also includes platinum, palladium, rhodium, iridium and osmium. Its established uses include electrical contacts, chip resistors, chemical catalysts and coatings for electrodes used in chlorine production. The [Royal Society of Chemistry](#) describes its ability to harden platinum and palladium alloys, helping electrical contacts resist wear. Its industrial value often comes from improving the performance of a much larger product with a relatively small amount of metal.

Its connection to AI begins with the physical construction of hard disk drives. [Furuya Metal Co., Ltd. \(TSE: 7826\)](#), a Japanese supplier of precious metal materials, explains that ruthenium is used in the thin films within recording media and magnetic heads. In conventional perpendicular magnetic recording, a ruthenium underlayer helps orient the magnetic grains, supporting higher storage density and reliability. This gives the metal a specific manufacturing role in the equipment that stores data for cloud computing and AI infrastructure.

The demand connection is real, but the overall market is more complicated than an uninterrupted AI growth story. In its [May 2026 outlook](#), Johnson Matthey forecast that data-centre expansion would lift ruthenium demand in hard disks to a five-year high. It nevertheless expected total ruthenium demand to decline by approximately 6%, because weaker chemical-sector consumption would outweigh that growth. A growing technology application can coexist with a shrinking overall market.

Johnson Matthey's [detailed supply and demand balance](#) projects 977,000 troy ounces of primary supply against demand of 1.193 million ounces in 2026. The resulting deficit is 216,000 ounces, approximately 6.7 tonnes or 18% of projected demand. These are forecasts, and the definitions matter: demand is measured after closed-loop recycling and surplus metal sales, while primary supply represents producers' sales of primary metal. The balance therefore indicates a requirement to draw on market stocks, rather than establishing that industrial orders will necessarily go unfilled.

The geographic exposure is particularly pronounced. Johnson Matthey estimates that South Africa accounts for more than 85% of global primary ruthenium supply, while the [International Platinum Group Metals Association](#) identifies smaller contributions from Zimbabwe and Russia. That concentration leaves buyers dependent on a narrow production base. A discussion of global platinum group metal resources can obscure how heavily this particular metal depends on South Africa.

A more recent assessment shows that price pressure persisted into October. Heraeus Precious Metals [reported](#) on October 19 that ruthenium had reached record highs during the previous week. It described annual supply of roughly one million ounces and explained that output depends on the economics of the broader platinum group metal basket. Ruthenium is recovered

alongside other metals, so a higher ruthenium price alone cannot quickly produce a corresponding increase in mine supply.

That is the structural problem behind the price move. A mine's investment case depends on the combined value of its production, its costs and its processing capability. A surge in demand for one relatively small component of that output does not automatically allow the operator to increase ruthenium output independently. As CMP puts it in its [October briefing](#), "demand can change faster than supply," creating pressure on both prices and sourcing.

For an industrial buyer, the practical issue is whether usable material will arrive in the required form and on the required schedule. Furuya's description of HDD materials emphasizes purity, composition and control of the thin-film structure as factors in performance and reliability. A tonne of material elsewhere in the supply chain cannot automatically replace a qualified input at a factory. That makes processing capability and established supplier relationships part of the supply question.

"What we're looking at is the industrial market," [Dr. Mark Andrich](#), CEO of [Critical Minerals Platform](#), explained in a [July 28 InvestorNews interview](#), discussing CMP's approach to pricing. His emphasis was on the market experienced by producers and industrial buyers. For ruthenium, that is a useful way to read a price assessment: the material specification, delivery terms and date belong alongside the headline number.

CMP's [published methodology](#) describes reference prices developed from information supplied by producers, refiners and industrial consumers, with actual traded volumes included where available. Its US\$1,780.14 assessment is consequently a defined reference point, rather than a claim that every buyer paid exactly that

amount. Comparing it with another supplier's quotation requires comparable specifications, timing and delivery terms. Consistency in those terms is essential when measuring how much prices have changed.

Recycling offers one practical response to supply constraints, and it is already an industrial business. Furuya says its [Tsuchiura plant](#) has annual ruthenium refining and recycling capacity of 25 to 30 tonnes. The company also describes recovering ruthenium and iridium from spent products and refining them to 99.999% purity. Those figures demonstrate processing capability, but capacity is not the same as actual annual recovery or additional metal available to the market.

The ownership of recovered metal matters as well. The IPA's [ruthenium factsheet](#) explains that much recycling takes place in closed loops, with the original owner retaining the material, while recovering tiny quantities dispersed through finished products is more difficult economically. Such recovery can reduce a customer's need to buy new metal without creating an equivalent quantity for sale to unrelated buyers. It helps explain why a sophisticated recycling industry can coexist with a tight primary supply balance.

Technology also creates a significant qualification to the AI demand thesis. The same IPA factsheet says heat-assisted magnetic recording, known as HAMR, uses much less ruthenium than established hard-drive technology. Higher storage capacity therefore does not automatically translate into proportionately greater ruthenium consumption. The mix of recording technologies and the quantity of metal required per unit of storage will also shape demand as stored data grows.

That transition is already commercial. [Seagate Technology Holdings plc](#) (NASDAQ: STX) [announced](#) in March that its Mozaic 4+

HAMR platform, supporting drives of up to 44 terabytes, was qualified and in production with two leading hyperscale cloud providers. The announcement establishes that new recording technology is reaching major customers, although it does not quantify ruthenium consumption. For the metal's market, the important question is how quickly growing storage requirements and lower material use per unit offset one another.

At the same time, advanced semiconductor manufacturing is opening another possible source of demand. In July, [Lam Research Corporation](#) (NASDAQ: LRCX) described [collaborative research](#) demonstrating ruthenium wiring lines just 10 nanometres wide. The work illustrates why the metal is being investigated as chip dimensions shrink. It is a technical milestone, however, and does not establish widespread commercial adoption or a measurable new annual market for ruthenium.

Furuya's own [discussion of ruthenium wiring](#) makes that distinction clear. The company has developed and shipped materials for the application, while identifying continuing challenges in processing, cost and mass production. Investors should therefore keep emerging chip applications separate from the established consumption that supports today's market. The opportunity depends on successful manufacturing adoption, with customers deciding whether the performance benefits justify the expense.

Producer results show how a small metal can become more valuable without dominating the company that sells it. [Sibanye Stillwater Limited](#) (JSE: SSW | NYSE: SBSW) [reported](#) ruthenium revenue of R1.940 billion for the first half of 2026, compared with R848 million a year earlier. That is an increase of approximately 129%, calculated from its reported figures, but still only about 2.2% of group revenue. An investment in the producer therefore carries exposure to a much broader business than the ruthenium

price alone.

For capital markets, the useful questions follow from these differences. How much of a company's revenue actually comes from ruthenium, and how much can it recover economically from the material it already handles? Does a processor have access to suitable feedstock and customers able to qualify its products? A rising reference price can improve an opportunity, but the financial result depends on recoverable volumes, costs and the terms under which the metal is sold.

Ruthenium's price surge deserves attention because it exposes how sensitive a small industrial market can become when new demand meets inflexible supply. Its next phase will depend on chemical-sector consumption, changes in storage technology and the recovery of usable metal. AI can increase ruthenium's importance while engineers simultaneously work to use less of it. That tension makes this a market worth following closely, with equal attention to the manufacturers using the metal and the producers supplying it.

Top 5 Ruthenium Mining Stocks by Market Capitalization

For investors following ruthenium's price rise, listed mining companies that produce and sell the metal provide a starting point for assessing equity exposure. The five largest companies in this mining-producer ranking are presented in descending order of approximate market capitalization, using October 20, 2026 closing data and expressing all values in US dollars. These valuations cover each company's entire business, with ruthenium contributing alongside other metals.

- 1. PJSC MMC Norilsk Nickel (MOEX: GMKN), known as Nornickel,**

ranks first with a calculated market capitalization of approximately **US\$21.6 billion**, based on its October 20 Moscow closing price, published share count and the exchange rate for that date. The Russian mining and metals group's [commercial product catalogue](#) includes several grades of ruthenium powder. Its position in the ranking reflects the scale of a broader business that also produces nickel, copper and other precious metals.

2. **Valterra Platinum Limited (JSE: VAL | LSE: VALT)** ranks second with a market capitalization of approximately **US\$19.6 billion**. Formerly Anglo American Platinum, the company became an independent listed business following its 2025 demerger from Anglo American. Its operations span mining in South Africa and Zimbabwe, processing, refining and international sales, with ruthenium included among the metals it produces and markets.
3. **Impala Platinum Holdings Limited (JSE: IMP | OTC: IMPUY)**, known as Implats, holds third place with a market capitalization of approximately **US\$10.2 billion**. Its mining and refining businesses provide exposure to ruthenium through an established platinum-group metals production base. The company's reported six-metal basket explicitly includes ruthenium alongside platinum, palladium, rhodium, iridium and gold, demonstrating why investors need to assess the wider metals mix when evaluating its earnings.
4. **Sibanye Stillwater Limited (JSE: SSW | NYSE: SBSW)** ranks fourth with a market capitalization of approximately **US\$7.0 billion**. Its South African PGM business provides direct ruthenium exposure within a group that also produces gold and operates precious metals recycling businesses. The company's separate disclosure of [ruthenium revenue](#) allows investors to track the metal's financial contribution within that diversified portfolio.

5. **Northam Platinum Holdings Limited (JSE: NPH)** completes the top five with a market capitalization of approximately **US\$5.8 billion**. Its [audited financial statements](#) disclose ruthenium revenue of R2.54 billion for the year ended June 30, 2026, compared with R1.15 billion a year earlier. Ruthenium accounted for approximately 4.7% of Northam's group revenue during the year, calculated from those statements, illustrating how the metal can make a measurable contribution within a broader mining business.

For more information on Ruthenium, the prices and associated supply chain data, go to [CriticalMineralsPlatform.com](https://criticalmineralsplatform.com).