JM News Release

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PGM PRICES SOAR AS DEMAND RECOVERS AMID SUPPLY DISRUPTION

Pgm demand recovered strongly from Covid disruption, with rising auto production, stricter emissions legislation, and resilient industrial demand.

Mining and processing outages hit supplies during 2020 and early 2021, driving pgm prices higher.

Palladium and rhodium prices surged to new all-time records in early 2021, with both markets in significant structural deficit.

- Palladium and rhodium are forecast to remain in deficit in 2021, as global auto production recovers, and clean air legislation becomes more stringent.
- Platinum could move back into surplus, despite higher autocatalyst demand, as higher prices curb investment and jewellery consumption.
- Primary pgm supplies have been affected by processing plant outages in South Africa and mine flooding in Russia but should improve as the year progresses.
- Consumers are now responding to record prices, with car companies accelerating thrifting and substitution programmes, and glass companies reducing rhodium use.

The **platinum** market is forecast to move back into surplus in 2021, despite a 27% gain in autocatalyst demand, according to estimates published in Johnson Matthey's latest Pgm Market Report. South African platinum supplies will rebound by nearly 40%, as Covid disruption subsides, and backlogs from processing outages in 2020 are treated. Higher prices are hitting investment, with Japanese bar purchasing turning negative in early 2021, and ETF buying subdued. Chinese retailers stocked up on platinum jewellery in the second half of 2020, but the recovery has stalled due to a narrowing discount to gold.

The **palladium** and **rhodium** markets will remain in deficit in 2021. Both metals recorded all-time high prices in early 2021, with palladium climbing above \$3,000 and rhodium repeatedly surging to \$30,000. In response, automakers have accelerated thrifting and substitution programmes, seeking to reduce the use of these metals in gasoline autocatalysts. Despite this, both palladium and rhodium will see double-digit growth in automotive demand in 2021, as vehicle output rebounds, and major markets phase in tighter emissions regulations and more stringent test procedures.

Rupen Raithatha, Market Research Director at Johnson Matthey, commented: "The overall pgm content of catalyst systems is still rising, in line with tightening emissions legislation in many regions, and the implementation of Real Driving Emissions testing in Europe. This is supporting palladium and rhodium demand, despite aggressive thrifting and substitution programmes at

virtually all global automakers. Meanwhile, platinum's share of the auto pgm mix is rising, and demand for platinum in gasoline cars will climb steeply in 2021, albeit from a low base. Platinum will also benefit from the phase-in of China VI emissions legislation. Meeting China VI limits requires a complete overhaul of heavy duty diesel catalyst systems, and we expect pgm loadings on Chinese diesel trucks to more than treble this year."

Mine supply of pgm is forecast to recover strongly in 2021, despite the temporary closure of two Russian mines due to flooding. Shipments of pgm from South Africa will be augmented by the refining of a backlog of approximately one million ounces of pgm that accumulated during processing plant interruptions last year. Strong prices will incentivise increased recycling of pgm from scrapped vehicles, but platinum recoveries will be constrained by technical difficulties in the treatment of diesel particulate filter scrap.

Alison Cowley, Principal Analyst at Johnson Matthey, said "Primary supplies will rise by around 16% this year, although they are expected to fall short of 2019 levels. Most South African shafts are operating close to pre-Covid levels, and production has already restarted at one of the two Russian mines that were affected by flooding. We also expect secondary supplies to rise strongly, although refining capacity constraints are starting to create some bottlenecks. Many secondary pgm refineries are operating close to their capacity ceilings and have only limited ability to take on additional volumes."

The 'minor' pgm, **ruthenium** and **iridium**, have seen steep price gains during early 2021. This reflected robust industrial purchasing, disruptions to South African supply, and rising investor awareness of the potential for pgm use in hydrogen applications. Johnson Matthey's May Pgm Market Report includes a special feature entitled 'Green hydrogen for a net zero future: What role for pgm?'

Margery Ryan, Principal Analyst at Johnson Matthey, said: "Net-zero commitments made by the UK, the European Union, China and most recently the Biden administration in the USA, will require much greater use of hydrogen as an alternative to fossil fuels, and pgm will play an important role in the hydrogen economy. We are already seeing strong growth in demand for platinum in hydrogen fuel cells for stationary and transport applications. In future, we expect to see wider use of pgm catalysts to produce green hydrogen using PEM electrolyser technology. Although it is early days for the clean hydrogen sector, it is already starting to shift sentiment towards the pgm - particularly platinum and iridium."

ENDS

Note to editors:

Johnson Matthey Plc's Pgm Market Report can be viewed and downloaded from the website (http://www.platinum.matthey.com/services/market-research/pgm-market-report) and provides an overview of demand for platinum group metals in 2020 and an outlook for 2021. You can follow us on Twitter at @PMMJM.

Johnson Matthey's Market Research Department has undertaken fundamental research into the Platinum Group Metals markets since the 1980s. Since 1985, Johnson Matthey has published supply and demand data twice yearly, in the Platinum and Interim Platinum series of reviews (1985–2013) and in the Pgm Market Report (2014–2021). Previous reviews and reports can be downloaded from

http://www.platinum.matthey.com/services/market-research/pgm-market-reports

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