



MARKET SPOTLIGHT

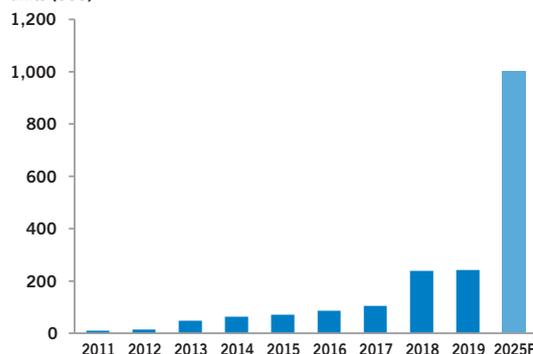
Will electric vehicle uptake in America dent PGM demand?

President Biden's push to accelerate the nation's transition towards electric vehicles (EVs) is a risk to autocatalyst palladium demand in the US. Momentum in the EV market has so far been driven by China and Europe, but 2021 is being branded as the breakout year for EVs in the US. The Biden administration has made EVs a priority with tax incentives and government funding. In addition, quite a number of new EV models are being launched in the US this year.

Can VW's ID.4 make EVs mainstream in the US? The roll-out of Volkswagen's ID.4 this year will launch the first affordable mass-market electric compact SUV from an established OEM. Compact SUVs are one of the fastest-growing segments in the car market. North America's EV sales are currently dominated by Tesla, but this is expected to change in coming years as competition from other manufacturers increases. If demand for these EVs takes off, 2021 could signal the start of a genuine shift towards clean mobility in the US.

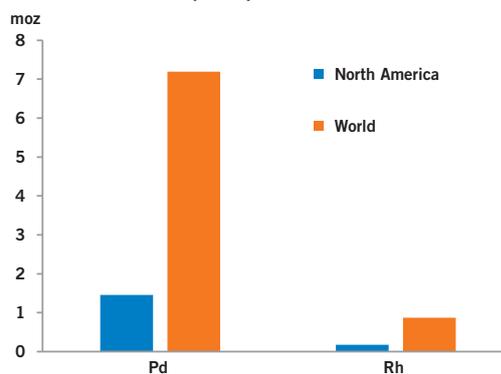
However, barriers to EV uptake remain. Beyond the appeal of having more models to choose from, will EVs suit consumers' lifestyles? Driving range, availability of charging infrastructure and high prices could all be a concern. For OEMs, issues over security of battery supply are another problem. Earlier this year, the US International Trade Commission imposed a 10-year import ban on South Korean battery-maker SK Innovation, which could impact Ford and VW's American EV plans over the next few years. The outlook in Europe is more positive, with Ford investing \$1bn in EV production at its plant in Cologne, Germany, as it targets an all-electric offering for passenger vehicles in Europe by 2030.

Annual EV sales in the US
units (000)



Source: SFA (Oxford), Transportation Centre at Argonne National Laboratory

Automotive demand (2020)



Source: SFA (Oxford)

BEV uptake puts palladium demand at risk. Although forecasts vary, sales of all-electric vehicles are estimated to reach 0.5-1.0 million units in the US by 2025, potentially removing demand of up to 140 koz of palladium (7% of US demand) and 19 koz of rhodium (8% of US demand). The US is the second-largest gasoline market in the world with 14.4 million light vehicles sold last year, accounting for 20% of global palladium and rhodium demand annually. If BEV sales temper rhodium demand, that may not be a bad thing as the market could be in deficit. However, if platinum substitution into gasoline autocatalysts expands significantly, the palladium market could end up in surplus as BEVs cut demand further. In the medium term, that would put downward pressure on the palladium price.



PRECIOUS METALS REVIEW

79 Au Gold

	Close	Weekly change	High	Date	Low	Date
\$/oz	1,784	-2.25%	1,827	16/02/2021	1,761	19/02/2021
€/oz	1,470	-2.33%	1,504	15/02/2021	1,456	19/02/2021

India's gold imports start the year strongly. Gold imports into India are reported to have been around 62 tonnes in January, as the gold price retreated from record highs. This was also before the reduction in tax was announced. These imports were notably higher than the 36.5 tonnes imported in the previous January, but down from December. However, December saw the highest monthly imports of 2020 at 73.2 t. India is the second-largest gold consuming nation with annual demand of 446 tonnes last year (source: World Gold Council). However, that was the lowest total for more than 10 years and with an improving economic situation this year, gold should see higher demand.

Gold price fades as other assets take the limelight. A great deal of attention has recently been focused on stock markets and bitcoin which have been making new all-time highs. It is difficult to value a digital currency but stock markets are looking very expensive on many metrics, so gold could be a useful diversifier if current stock market valuations prove to be unsustainable. The gold price is still consolidating last year's 25% gain and is expected to recover in due course.

47 Ag Silver

	Close	Weekly change	High	Date	Low	Date
\$/oz	27.45	0.50%	27.96	16/02/2021	26.14	18/02/2021
€/oz	22.62	0.42%	23.02	16/02/2021	21.57	18/02/2021

China's photovoltaic silver demand is set to increase this year. The China Photovoltaic Industry Association predicts 65 GW of installations in China this year. That would be a rise of 35% from the 48.2 GW that was installed last year. Installations surged in December so the year ended strongly. Overall installations were up 60% from 2019. Another strong year in China could lift global installations above 150 GW for the first time.

Silver use in photovoltaics represents around 10% (~95 moz) of total demand. Even with the ongoing thrifting, photovoltaic demand should be higher this year. The silver price has held up somewhat better than gold over the last few weeks, as it is still well above its lowest price points of the past few months. Silver is expected to outperform gold this year.

78 Pt Platinum

	Close	Weekly change	High	Date	Low	Date
\$/oz	1,299	3.59%	1,340	16/02/2021	1,225	17/02/2021
€/oz	1,071	3.47%	1,103	16/02/2021	1,015	17/02/2021

Sibanye-Stillwater has revealed details of new supply in South Africa, including development of its K4 project at Marikana and Klipfontein open-cast project at Kroondal. K4 is a low-cost project which was advanced by Lonmin before Sibanye-Stillwater's acquisition in 2019. It is expected to be brought into production within 12 months and reach annual output of 250 koz 4E¹ in seven years, including an estimated 125 koz of platinum. K4 is predicted to extend the life-of-mine of Marikana to around 50 years, from 16 years currently, and therefore becomes replacement production from the late 2020s onwards.

including 939 koz of platinum. Platinum production across both regions (US + South Africa) was relatively flat in 2020 at 1.07 moz (-0.65% year-on-year), as US operations remained relatively strong for most of the year, and South African operations had reached normalised rates by November. Production guidance for Sibanye-Stillwater's mines in South Africa this year is 1.75-1.85 moz 4E, including an estimated 1-1.1 moz of platinum. The platinum price broke through \$1,300/oz for the first time since 2014 but failed to hold on to its gains. The price is overbought so could pull back further near term.

PGM production from Sibanye-Stillwater's South African operations exceeded guidance last year at 1.57 moz 4E,

¹4E refers to platinum, palladium, rhodium and gold.



PRECIOUS METALS REVIEW

⁴⁶ Pd **Palladium**

	Close	Weekly change	High	Date	Low	Date
\$/oz	2,383	-0.25%	2,422	16/02/2021	2,334	19/02/2021
€/oz	1,964	-0.32%	1,994	16/02/2021	1,932	19/02/2021

Sibanye-Stillwater's palladium production slipped 1.1% last year, and fell below guidance at US PGM operations towards the end of last year due to the impact of Covid. Total palladium supply across the Group was 938 koz. Mined 2E (Pt +Pd) production from the US is forecast to be between 660 koz and 680 koz this year, including an estimated 522 koz of palladium. An additional ~500 koz is projected to come from South Africa. The expansion of Stillwater's Blitz project in the US is running two years behind schedule, with production now expected to reach annual steady state of 200 koz 2E by 2024. Palladium remains in a trading range but the price could slip lower

as South African refined output improves.

The K4 project could bring an estimated 50 koz of palladium to the market annually once it has reached steady-state production and could help to partially offset mine depletion in South Africa in the long term. However, additional supply is needed in the near term to ease the projected market deficit for palladium. Incentivised by high prices, supply from secondary sources, i.e. recycling, is expected to increase this year, which will help to reduce the supply gap slightly.

⁴⁵ Rh ⁴⁴ Ru ⁷⁷ Ir **Rhodium, Ruthenium, Iridium**

	Rhodium	Ruthenium	Iridium
Reporting week	\$24,350/oz	\$375/oz	\$5,050/oz
Previous week	\$23,050/oz	\$375/oz	\$5,050/oz

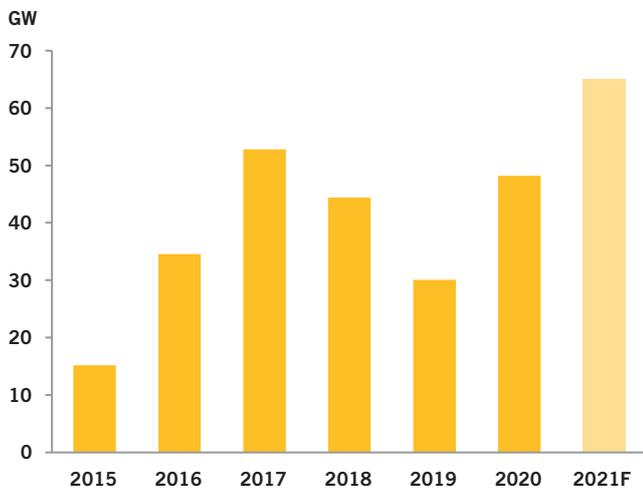
At steady-state production, Sibanye-Stillwater's K4 project could account for around 20 koz of rhodium a year, equivalent to 3% of South Africa's annual rhodium supply. However, as noted above, restarts and projects can take years to reach full production. In the meantime, rhodium's high price is incentivising fabricators to

investigate the substitution of rhodium in autocatalysts. Given today's more stringent NO_x emissions standards, that might be more challenging than in 2008 when rhodium first traded above \$10,000/oz. The rhodium price reached another record high of \$24,350/oz last week, while iridium and ruthenium were unchanged.



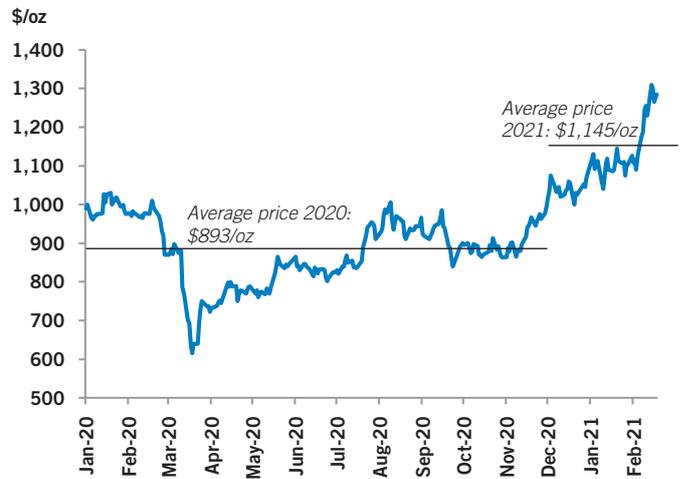
TRENDS AND INVESTMENTS

China annual PV installations



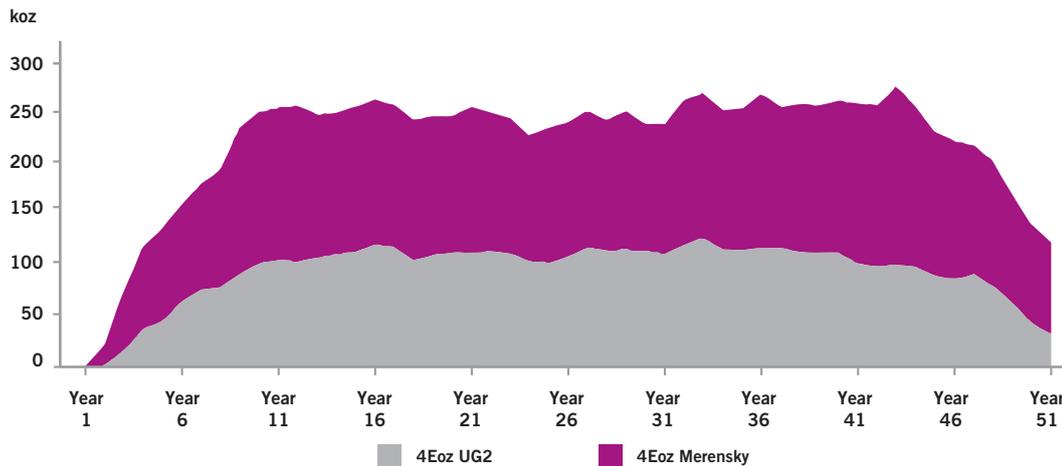
Source: SFA (Oxford), NEA, China Photovoltaic Industry Association

Platinum price



Source: SFA (Oxford), Heraeus

K4 project expected 4Eoz production



Source: Sibanye-Stillwater

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