

# Can the palladium market continue to defy gravity?

Palladium prices have risen from US\$316/oz in January 2016 to US\$2,329/oz today, representing an impressive 637% gain in just under 5 years. The big question investors want to know is where will the prices go from here? To get a feel for the answer, today I look at palladium supply and demand and what the industry expects.

**Palladium prices have had an impressive rally since January 2016 up 637%**



Source

## 2020 palladium supply vs demand forecast

Palladium supply decreased in 2020 due to COVID-19 related supply disruptions from South Africa, but palladium demand also weakened in 2020 due to a slowdown in conventional car

sales due to COVID-19.

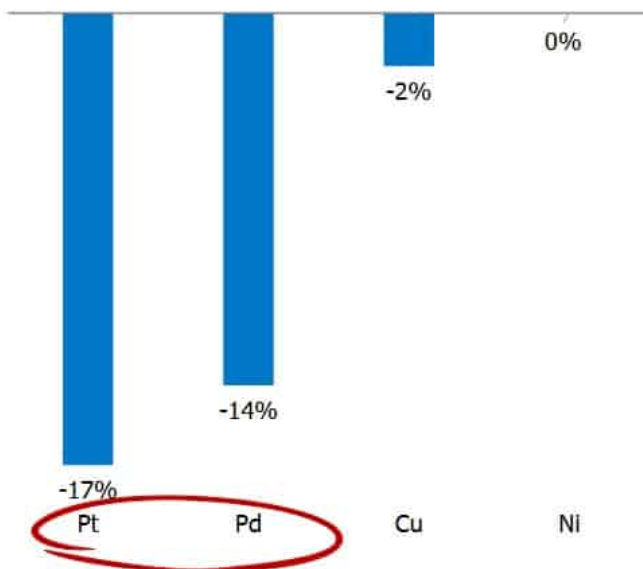
According to the world's largest palladium producer, Norilsk Nickel, 2020 global palladium supply is forecast to fall 14% and demand is forecast to fall 16%. Effectively balancing a market that was previously in deficit. This forecast suggests that palladium prices should remain relatively high in 2020, especially if auto demand continues to pick up in Q4, 2020.

**Palladium (Pd) supply estimated to fall 14% and demand to fall an estimated 16% in 2020**

## COVID-19: Major Distortion to Commodity Markets in 2020

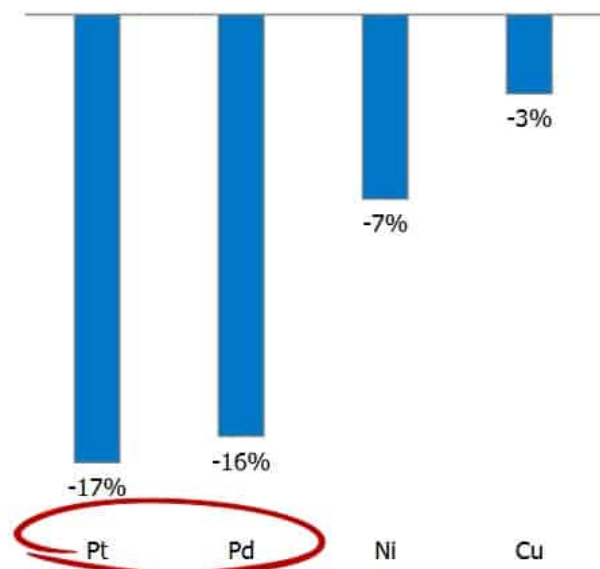
Global Supply of PGMs Impacted the Most due to Quarantine in SA, Little Impact on Base Metals

Supply 2020E vs 2019



Global Demand for PGMs Down Sharply on a Major Contraction of Autos, Base Metals Being Less Affected

Consumption 2020E vs. 2019



Source

Mid term palladium demand continues to look strong as tightening auto-emissions rules are requiring larger volumes of palladium in exhaust systems (75% of palladium demand comes from catalytic converters). By 2030 onward 100% battery electric vehicles (EVs) may be taking significant market share that palladium auto demand begins to decline. At that point the EV and battery metals such as lithium, cobalt, copper,

nickel, manganese and graphite should be doing very well as EV sales start to dominate.

In the mid term new palladium supply is expected to continue to be slow to come online as palladium is usually mined as a by-product of nickel or platinum mining. In the long term high palladium prices will most likely lead to more supply and some price reductions for palladium.

**Best palladium performers on Sept. 30, 2020 from InvestorIntel's Palladium Watchlist**



**Source**

A palladium company we have been watching lately is Canadian Palladium Resources Inc. (CSE: BULL | OTCQB: DCNNF | FSE: DCR1). Canadian Palladium is an exploration stage company that has a 100% interest in the East Bull Palladium Property in the Sudbury Mining Division in Ontario, Canada. The company recently found high grade palladium at their East Bull

Palladium Property. Canadian Palladium also owns the Tisova Copper/Cobalt Project which gives them exposure to the EV metals market in the longer term. You can click the link below to read more.

- Canadian Palladium strikes high grade palladium at their East Bull Project

The palladium market continues to perform very well in 2020 despite COVID-19 related supply and demand issues. In the short term palladium demand should continue to recover as global auto sales recover. In the mid term palladium demand is expected to remain strong due to tightening emission standards globally. Norilsk Nickel forecasts the medium term outlook for palladium as neutral and the long term outlook as positive. Longer term, by 2030, palladium demand should begin to fall as we move faster to EVs and conventional internal combustion Engine (ICE) car sales decline rapidly.

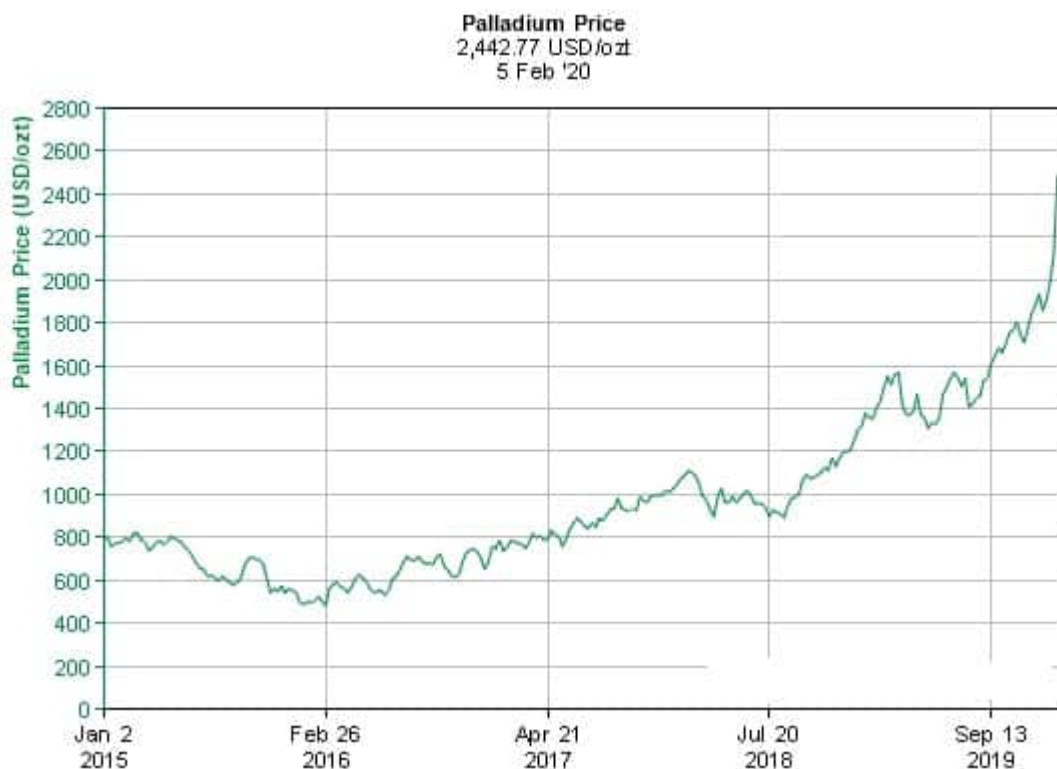
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## **The palladium bull run continues as we take a look at two promising palladium juniors**

The palladium market continues to rocket higher as a severe structural palladium deficit continues due to strong demand and restrained new supply.

Palladium is currently priced at USD \$2,442 and is showing no signs of falling, as tightening emissions standards in Europe and China in 2020 have meant demand is increasing.

## Palladium prices continue to surge higher – Now at USD \$2,442



### Palladium's uses

Palladium is a key ingredient in vehicle catalytic converters which account for over 75% of palladium demand. Palladium in catalytic converters is not easily replaced and compared to the overall car cost the price rise can be tolerated by car companies, at least for now. Other uses for palladium include electronics, dentistry, medicine, chemical applications and jewelry (white gold).

### Two Canadian junior palladium exploration companies

#### Canadian Palladium Resources Inc. (formerly 21C metals Inc.)

Canadian Palladium Resources Inc. (CSE: BULL | OTCQB: DCNNF) is an exploration company focused on palladium. In 2019 Canadian Palladium (then 21C Metals) acquired an option agreement with Pavey Ark Minerals Inc. to acquire a 100% interest in the East Bull Palladium Property in the Sudbury Mining Division in Ontario, Canada.

The East Bull Palladium Project is situated on the 992 hectare East Bull property. It has a 43-101 compliant inferred resource estimate of 1.1 million tonnes of ore at a grade of 1.46g/t Pd Eq for a total of 523,000 ounces palladium (Pd) Equivalent (Eq), with significant upside potential.

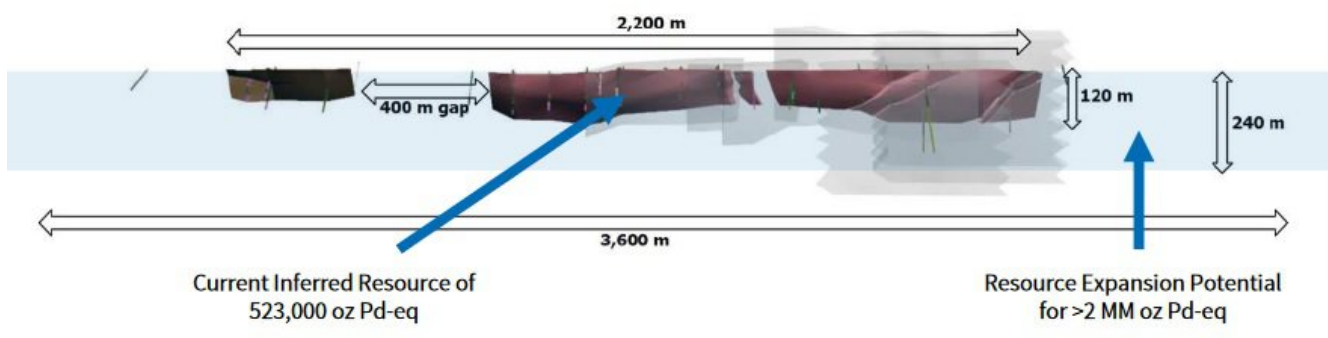
The Project has been drilled over an 1.8 km strike length to a maximum depth of 120 m; however, the mineralized zone is 3.6 km in length and open at depth. This suggests the final resource is potentially ~4x the current resource (assumes it continues to a depth of 240 m) for about 2 million oz of palladium equivalent.

After a recent successful capital raising the Company is fully funded for a new 10,000 m drilling program set to start soon. The purpose is to test the full strike length and expand upon the inferred resource.

The Project also has good logistics and infrastructure.

The current market cap is just C\$19.8 million.

**Based on the mineralization the potential resource is 4x larger**



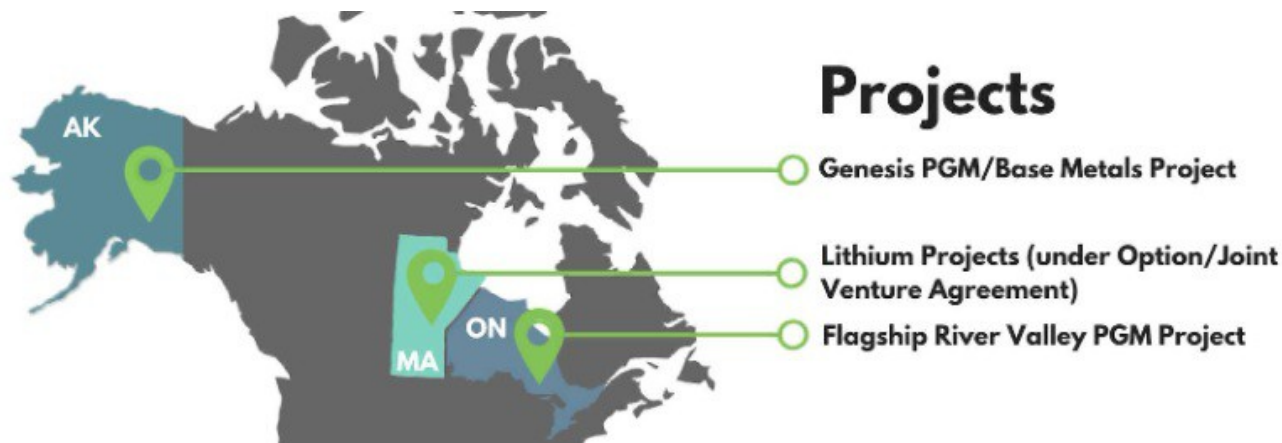
## New Age Metals Inc.

New Age Metals Inc. (TSXV: NAM | OTCQB: NMTLF) is a mineral exploration company focused on the exploration and development of platinum group metals (includes palladium and platinum) and lithium. The Company's flagship is their 100% owned River



Valley PGM Project in Canada. They also have options to purchase and JV into several lithium projects, and the Genesis PGM/Base Metals Project.

## New Age Metals projects summary



The River Valley Project (flagship) is located in the Sudbury region of Northern Ontario. Overall, the River Valley PGM deposit is 16 km+ of mineralized deposit. The Company state that their project is Canada’s largest primary platinum group metals deposit.

The NI 43-101 Mineral Resource Estimate announced January 9, 2019 resulted in a Measured & Indicated Resource estimate of **2.866 million ounces** of contained palladium equivalent (@0.9%), and an Inferred Resource of 1.059 million ounces of contained palladium equivalent (@0.63%).

Class]	PGM + Au (oz)	PdEq (oz)	PtEq (oz)
Measured	1,394,136	1,700,957	1,700,957
Indicated	983,071	1,165,978	1,165,978
Meas +Ind	2,377,207	2,866,935	2,866,935
Inferred	840,851	1,059,473	1,059,473

A recent Preliminary Economic Assessment (PEA) resulted in an after tax NPV5% of \$138 million, an after tax IRR of 10%, over a 14 year mine life. The initial CapEx was estimated at C\$495 million. The key here is that if the mine life can be extended to 20 years then the NPV would improve significantly. Also the above was based on a palladium price of only US\$1,200/oz Pd, compared to today's price of US\$2,442; and a gold price of US\$1,350 compared to today's price of US\$1,562. According to the Company if the PEA used a base price of US\$2,090/oz Pd, then the after-tax IRR would rise significantly to 27%.

The current market cap is just C\$8.7 million.

### **Closing comment**

Investors should consider both **Canadian Palladium** and **New Age Metals** as a way of gaining early stage exposure to the palladium sector. Naturally, the early stage means risk is higher, but both companies already have good initial resources and are located in the safe jurisdiction of Canada.

It looks clear for now that the precious PGMs and gold will continue to be in strong demand in future years. This is a great opportunity here for patient investors wanting cheap early to mid-stage exploration exposure to the precious metals.