Weekly Precious Metals News Articles: January 29, 2021

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Below is a cross section of relevant news article to the world of Precious Metals:
Markets, Supply & Demand, Investment, and Industrial Applications.
Printable PDF version attached. Enjoy-

Gold

- **The Gold Standard Ended 50 Years Ago. Federal Debt Has Only Exploded Since**
    - This year marks the 50th anniversary of the end of the gold standard in the U.S. Overnight, the dollar became a free-floating currency, measurable only by comparing it to other world currencies.
    - Over the past 50 years, gold has expanded more than 46 times, with a compound annual growth rate (CAGR) of about 8%.
    https://www.forbes.com/sites/greatspeculations/2021/01/25/the-gold-standard-ended-50-years-ago-federal-debt-has-only-exploded-since/
- **Gold Demand Trends Full year and Q4 2020 | World Gold Council**
    - Weak Q4 set the seal on an 11-year low for annual 2020 gold demand.
    - The global gold market was ravaged by COVID-19 disruption throughout the year, while record high prices were a mixed blessing.
    https://www.gold.org/goldhub/research/gold-demand-trends/gold-demand-trends-full-year-2020
- **India's gold jewellery demand down 42% in 2020 to 315.9 tonnes: WGC**
    - Total investment demand for 2020 was down by 11 per cent at 130.4 tonnes in comparison to 145.8 tonnes in 2019, according to WGC's latest Gold Demand Trends report
    https://www.business-standard.com/article/markets/india-s-gold-jewellery-demand-down-42-in-2020-to-315-9-tonnes-wgc-121012800622_1.html

Semiconductor Related Articles (impacting Precious Metals electronics):

- **The world is dangerously dependent on Taiwan for chips**
    - Taiwan's grip on the semiconductor business — despite being under constant threat of invasion by Beijing — also represents a choke point in the global supply chain that is giving new urgency to plans from Tokyo to Washington and Beijing to increase self-reliance.
    https://www.taipeitimes.com/News/editorials/archives/2021/01/27/2003751278
- **Smartphone Shipments Return to Positive Growth in the Fourth Quarter Driven by Record Performance by Apple, According to IDC**
    - According to the IDC worldwide smartphone vendors shipped a total of 385.9 million devices during the quarter. The full year 2020 declined 5.9% y/y compared to 2019
    https://www.idc.com/getdoc.jsp?containerId=prUS47410621
- **Tight chip supplies could persist for as long as a decade**

    - China’s automotive-chip shortage could persist for as long as a decade, but it has little to do with the current supply glitches snarling production. https://www.autonews.com/china/tight-chip-supplies-could-persist-long-decade
- **Semiconductor Engineering: The Good, Bad And Unknowns Of Flexible Devices**
    - Flexible hybrid electronics are beginning to proliferate in consumer, medical, and industrial applications due to their comparatively low weight, thin profile, and the ability to literally bend the rules of design. https://semiengineering.com/the-good-bad-and-unknowns-of-flexible-devices/

Silver

- **Silver and Palladium: MLCC supply is beginning to tighten**
    - As lead times grow, expect the MLCC market to tighten throughout 2021. Increased demand from the communications & transportation sectors can be attributed to advancements in 5G infrastructure and cellular handsets in Asia, and to a lesser degree the global auto market’s move toward the electrification of drive trains along with more robust safety and infotainment applications.
    - Page #16 article written by TTI’s vice president of product and supplier marketing, Jeff Ray https://electronics-sourcing.com/wp-content/uploads/2020/12/ESNA-Jan21-Digital.pdf
- **First Solar sells 10 GW solar pipeline for $261 million (8.5 Moz Ag equivalent)**
    - The deal includes the Rabbitbrush, Madison, Oak Trail, Horizon, and Ridgely projects, which are expected to start construction in 2 years, and the 30MW Barilla Solar project, which is operational. https://pv-magazine-usa.com/2021/01/25/first-solar-sells-10-gw-solar-pipeline-for-261-million/

Precious Metals Mining:

- **MMC Norilsk Nickel: Nornickel announces production results for 4Q and FY2020**
    - Total PGM metals production exceeded the guidance owing mainly to successful ramp-up of the refining shop at Kola MMC after its upgrade to a new chlorine leaching technology.
    - In 2020, palladium and platinum output reduced 3% y-o-y to 2,826 koz and 1% y-o-y to 695 koz, respectively, owing to the commissioning of the new precious metals concentrate production line at the metallurgical shop of Kola MMC, as well as high base effect of 2019, when Krasnoyarsk Precious Metals Plant processed earlier accumulated work-in progress inventory. https://www.finanznachrichten.de/nachrichten-2021-01/51868117-mmc-norilsk-nickel-nornickel-announces-production-results-for-4q-and-fy2020-015.htm
- **South Africa's mining industry prepares for $20 million COVID-19 vaccine rollout effort**
    - South Africa’s mining industry estimates it will cost around 300 million rand ($20 million) to help the government roll out COVID-19 vaccines to mineworkers and community members as the country battles a surge in infections, the industry body told Reuters on Thursday. https://www.reuters.com/article/uk-health-coronavirus-safrica-vaccines-idUSKBN29Y0RN
- **Anglo American shows recovery in its second-half production**
    - PGM production at Anglo American Platinum’s own-managed mines fell by 13% in 2020 compared to a year earlier and by 8% to 617,800 ounces in the December quarter due to the closure of mined-out infrastructure at the Amandelbult mine and community-related disruptions at the Mogalakwena mine. Refined PGM production fell by 42% in 2020 to 2.7 Moz compared to 4.6 Moz in 2019.
    - During the December quarter, refined PGM production from own material excluding toll-treated material decreased by 49% to 673,100 ounces. https://www.iol.co.za/business-report/companies/anglo-american-shows-recovery-in-its-second-half-production-65f5f679-09db-4376-b7a9-16acce5c2f20
- **Responsible Mining Foundation seeks ‘more ambitious’ standards for TSFs**

- The vast majority of large-scale mining companies are still unable to demonstrate that they review and report on how effectively they manage risks related to tailings storage facilities (TSFs), and take responsive actions as necessary, despite growing disclosure on TSFs. https://www.miningweekly.com/article/responsible-mining-foundation-seeks-more-ambitious-standards-for-tsfs-2021-01-22/rep_id:3650

- **2021 poised to be significant year of transition for SA's energy and minerals sectors**
  - This year could prove to be game changing for the long-term prospects and resilience of South Africa's energy and minerals sectors. https://www.miningweekly.com/article/2021-poised-to-be-significant-year-of-transition-for-sas-energy-and-minerals-sectors-2021-01-22-1

E-Waste & Precious Metals Recycle Related:

- **Pandemic-Driven IT Investment Puts New Focus on Growing E-Waste Crisis**
  - At some point, once this public health crisis passes, many employees will return to their offices. The question then is what will happen to excess IT equipment: Will it add to an already significant global e-waste problem? https://www.eweek.com/pc-hardware/pandemic-driven-it-investment-puts-new-focus-on-growing-e-waste-crisis
- **New research project on sustainable electronics promises to reduce e-waste problem**
  - Assistant Professor Shweta Agarwala from the Department of Electrical and Computer Engineering at Aarhus University will use materials science and printed electronics to deal with the ever-increasing problem of electronic waste. She has just received DKK 6 million (EUR 810.000) from the Villum Foundation to start a research project aimed at creating novel electronically functional materials that are completely biologically degradable. https://www.eurekalert.org/pub_releases/2021-01/au-nrp012521.php

Platinum

- **Actus Metal Portfolios: PGMs - PLATINUM GROUP METALS**
  - PGM demand will continuously outstrip stagnant supply in as little as two to three years. 57-page report. https://www.metalsdaily.com/files/Auctus-PGM-Jan2021-FA.pdf
- **Single atoms as a catalyst**
  - Metals such as gold or platinum are often used as catalysts. In the catalytic converters of vehicles, for example, platinum nanoparticles convert poisonous carbon monoxide into non-toxic CO2. Because platinum and other catalytically active metals are expensive and rare, the nanoparticles involved have been made smaller and smaller over time. https://phys.org/news/2021-01-atoms-catalyst.html
- **Bullion. Directory` - Matt Watson: Precious Metals Commodity Management**
  - Gold is Not the Only Precious Metal – Matt Watson's pick of metal investments for the next decade includes some less well-known choices with enormous upside potential… https://bullion.directory/matt-watson-precious-metals-commodity-management/
- **Platinum price remains in the bull market but coronavirus concerns could add further pressure**
  - Platinum extended its correction from the recent highs above $1150, but as long the price is above $1000, there is no risk of the bear market. https://invezz.com/news/2021/01/22/platinum-price-remains-in-the-bull-market-but-coronavirus-concerns-could-add-further-pressure/

Fuel Cells/Hydrogen Economy Related Articles:

- **Hydrogen aims for cost parity with oil**

- Norwegian hydrogen technology developer Nel has detailed plans to produce hydrogen from renewable sources at $1.50/kg to compete with fossil fuels such as petrol and diesel. The move would be a dramatic shift in producing power and drive fuel cell technology https://www.eenewseurope.com/news/hydrogen-cheaper-oil

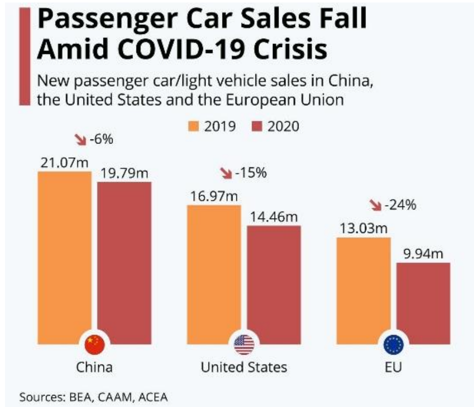
- **Hydrogen fuel cell vehicle parts manufacturing intensifies at Toyota Motor**
  - A new plant has been constructed for the mass-production of these hydrogen fuel cell vehicle parts. It is located in Inabe, Mie Prefecture, and involved a ¥12 billion ($115 million USD) investment. https://www.hydrogenfuelnews.com/fuel-cell-vehicle-parts/8542819/?mc_cid=60a1812405&mc_eid=70c1246d58
- **WPIC: Hydrogen in the USA**
  - Will the US hydrogen economy, and its inextricable link to platinum, benefit from the new administration? https://platinuminvestment.com/files/sixtysecs/WPIC_60Seconds_HydrogenintheUSA_012721.pdf
- **Blue World methanol fuel cell company acquisition of Danish Power Systems green lit**
  - Blue World Technologies has begun its methanol fuel cell technology commercialization via large-scale production. Moving forward, its intention is to begin pre-series production midway through this Methanol fuel cell Business Deal with a 5,000-unit (50 MW) production capacity. https://www.hydrogenfuelnews.com/methanol-fuel-cell/8542821/?mc_cid=60a1812405&mc_eid=70c1246d58
- **Fuel Cells and Batteries: The Future of Mobility?**
  - "As the costs of both technologies come down, batteries and fuel cells as well as ultra-capacitors will be more and more associated. Despite the trajectory for ongoing cost reductions and moving up scale on the battery side, the mass energy density of batteries will still never equal that of a fuel cell. Therefore, massive heavy-duty transport applications like large trains is one use-case where batteries are not expected to favor fuel cells." https://www.railwayage.com/mechanical/hydrogen-and-fuel-cells-the-future-of-mobility/
- **DSME Moves Ahead with Solid-Oxide Fuel Cell Systems**
  - SOFCs can consume a variety of hydrogen-containing fuels, stripping out the H2 in a reforming process and reacting it with oxygen to generate electrical power. They can be designed to run on distillate fuels, ethanol, natural gas or ammonia - unlike proton exchange membrane (PEM) fuel cells, which cannot directly use fuels other than pure hydrogen. They have a thermal efficiency in the range of 60 percent, about 10 percentage points better than the most efficient two-stroke diesels, and can achieve 70-plus percent efficiency when combined with a waste heat recovery system. https://maritime-executive.com/article/dsme-moves-ahead-with-solid-oxide-fuel-cell-systems
- **Kawasaki completes world's first liquefied hydrogen receiving terminal - Hy touch Kobe**
  - Kawasaki Heavy Industries, Ltd. recently completed Kobe LH2 Terminal, the world's first liquefied hydrogen receiving terminal. Kawasaki built this terminal for the CO2-free Hydrogen Energy Supply-chain Technology Research Association. Operation testing has started, which will be used for a demonstration test for an international hydrogen energy supply chain to transport liquefied hydrogen from Australia to Japan. https://www.greencarcongress.com/2021/01/20210123-kobe.html

Palladium

- **Biden redirects course on emissions standards**
  https://www.rubbernews.com/automotive/biden-redirects-course-emissions-standards
- **TCP – Low Temperature Combustion Imitative (ICE Emission Reduction Development)**

- The Combustion TCP is organized under the auspices of the International Energy Agency through the Implementing Agreement for Energy Conservation and Emissions Reduction in Combustion.
- Examine viable lead and dilute low-temperature combustion concepts to assess potential for increasing energy efficiency and reducing exhaust emissions of ICE, with emphasis on vehicle applications. Contribute to the scientific knowledge base of in-cylinder combustion processes and associated fuel effects. Has the potential to improve ICE fuel economy by 20-25%.
https://www.ieacombustion.com/collaborative-tasks/low-temperature-combustion-ltc/

- **Infographic: Passenger Car Sales Fall Amid COVID-19 Crisis**
https://www.ibtimes.com/infographic-passenger-car-sales-fall-amid-covid-19-crisis-3131273



PGM Minor Metals (Rhodium, Iridium, Ruthenium)

- **Ruthenium & Iridium: Shintech to invest $1.3 billion for Louisiana expansion**
  - Shintech Louisiana LLC plans to invest another $1.3 billion to expand its manufacturing sites in Iberville and West Baton Rouge parishes.
  - The U.S. subsidiary of the world's largest producer of polyvinyl chloride resins, or PVC, said nearly all the expansion, about $1.25 billion, will be used to increase manufacturing capacity at its Plaquemine site, which produces PVC, chlor alkali and vinyl chloride monomer. The remaining $500 million is for expansion of the company's PVC packaging warehouse operation in Addis.
  https://www.theadvocate.com/baton_rouge/news/business/article_1beb5bba-5fff-11eb-b98a-3f6e12b7d243.html
- **Iridium: Samsung Galaxy S21 Ultra to sport low-power OLED display**
  - Samsung on Monday unveiled a new low-power OLED smartphone display that will make its debut on the new Galaxy S21 Ultra. The electronics giant says the new display tech reduces power consumption by 16% by speeding up electron flows in the display's organic layers.
  - Display panels are a major power hog in smartphones. OLED displays contain pixels made of organic materials that glow when electricity touches them. By accelerating the electrons' flow across the display's layers, the panels can create brighter light while consuming less power and in turn increasing battery life, Samsung said.
  https://www.cnet.com/news/samsung-galaxy-s21-ultra-to-sport-low-power-oled-display/
- **Iridium & Platinum: Cummins supplies 20 MW PEM electrolyzer in Canada**
  - One of the four Cummins HyLyzer electrolyzer skids that have been fitted in an existing Air Liquide hydrogen production facility in Bécancour, Quebec, Canada.
  https://www.dieselgasturbine.com/news/Cummins-supplies-20-MW-PEM-electrolyzer-in-Canada/8009918.article

BEV / LiB Battery Market News

- **Australian lithium miners break out of doldrums as EV demand booms**
  - Beleaguered Australian lithium miners showed the first signs of optimism in nearly three years this week, boosted by a recovery in electric vehicle (EV) demand led by China's coronavirus response, company quarterly updates showed. https://www.miningweekly.com/article/australian-lithium-miners-break-out-of-doldrums-as-ev-demand-booms-2021-01-29
- **Green technology boost for African mining**
  - The World Economic Forum has estimated that demand for high-purity nickel for EV battery production "will increase by a factor of 24 in 2030 compared to 2018 levels".
  - "As the world forges ahead with plans to decarbonise, it's increasingly looking towards more sustainable means to satisfy today's growing demand for greener inputs to manufacture electric vehicles and specifically their batteries. https://www.miningweekly.com/article/innovative-hydrometallurgy-unlocks-metals-bonanza-for-tanzania-2021-01-26
- **Hyundai sets sights on 60% increase in EV sales this year**
  - South Korean carmaker revs up efforts to grab greater share of competitive market https://www.ft.com/content/261a23c4-04ab-4a34-ae10-76620da05e8e
- **Rare earth prices go through the roof as China tightens supply**
  - RRE prices + 11% after the release of a government notice proposing stronger management and regulation of the sector; the shares of mining companies involved in the industry also got a sharp lift.
  - China currently mines and processes as much as 90% of the world's rare earths. Even rare earth deposits from other countries are sent to China as only the PRC has this capability because processing facilities in countries such as the US closed down. https://www.asiatimesfinancial.com/rare-earth-prices-to-go-through-the-roof-as-china-tightens-supply?
- **Tesla CEO Elon Musk announces $100 million donation for the best carbon capture technology**
  - He didn't reveal more about how the prize is going to be giving away, but he did say that more information is going to be released next week. https://electrek.co/2021/01/21/tesla-ceo-elon-musk-100-million-donation-best-carbon-capture-technology/
- **Volvo: Transparency around electrification**
  - Complete transparency when it comes to the full carbon impact of our electric vehicles (EVs) is something we see as a corporate and social responsibility. That's why we have produced a comprehensive lifecycle analysis (LCA) of the carbon footprint of our first BEV, the XC40 Recharge, and compared it to an XC4O ICE. https://group.volvocars.com/news/sustainability/2020/transparency-around-electrification

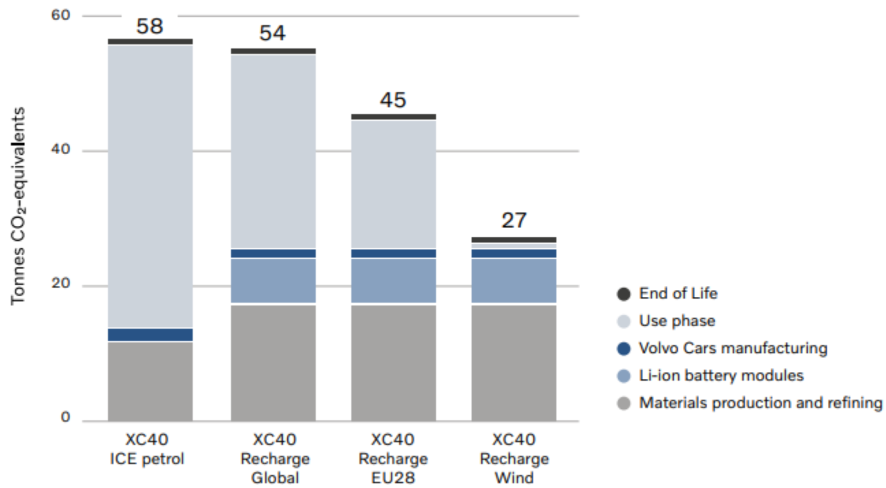


Figure i. *Carbon Footprint for XC40 ICE and XC40 Recharge, with different electricity-mixes in the use phase used for the XC40 Recharge. Results are shown in tonne CO_2-equivalents per functional unit (200 000 km lifetime range).*

Regards –