



Weekly Precious Metals News Articles: November 5, 2021

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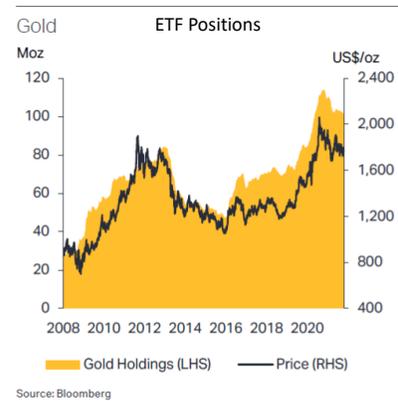
Below is a cross section of relevant news article to the world of Precious Metals:

Markets, Supply & Demand, Investment, and Industrial Applications.

Printable PDF version attached. Enjoy-

Gold

- **Gold tops \$1,800 traders focus on inflation & weak labor participation after upbeat US jobs data**
 - Gold prices climbed back above \$1,800 an ounce on Friday, after data showing the U.S. created more jobs than expected, though a disappointing number of people chose to join the workforce last month and rising inflation dulled prospects for stronger economic growth.
<https://www.msn.com/en-us/money/markets/gold-tops-241800-as-traders-focus-on-inflation-and-weak-labor-participation-after-upbeat-us-jobs-data/ar-AAQm7E1?ocid=BingNewsSearch>
- **Gold shakes off strong U.S jobs growth, rides Fed wave to weekly gain**
 - Gold is on pace to post a weekly gain of nearly 1% on Friday, as they shrugged off stronger-than-expected monthly jobs data, in a week that saw major central banks standing pat on interest rates.
<https://www.nasdaq.com/articles/precious-gold-shakes-off-strong-u.s-jobs-growth-rides-fed-wave-to-weekly-gain-2021-11-05>
- **Why Isn't Gold Rallying Along With Inflation?**
 - The case for gold is not lost. Gold bulls should be patient. The growth is going to slow down, and when inflation persists for several months, the pace of real growth will decline even further, shifting the market narrative to worrying about inflation's negative effects and stagflation. Gold should shine then.
<https://www.investorideas.com/news/2021/mining/11053TradingAlert-Gold.asp>
- **Gold ETF Outflows Continue as Stock Markets Set New Record Highs Ahead of the Fed**
 - Gold prices recovered last week's loss in London on Monday after gold ETFs continued to see investment outflows and global stock markets set new record highs even while the US Dollar and longer-term interest rates rose ahead of this week's Federal Reserve policy meeting
<https://www.bullionvault.com/gold-news/gold-etf-110120211>
- **Geopolitical Risk?: Large-Scale Russian Troop Movements Along Ukraine Border Spark Alarm In US & Europe**
 - Matt: Geopolitical risks high in Taiwan and in now also in the Ukraine.



<https://www.zerohedge.com/geopolitical/new-large-scale-russian-troop-movements-along-ukraine-border-spark-alarm-us-europe>

Semiconductor Related Articles (impacting Precious Metals electronics):

- **GlobalFoundries CEO: We're sold out of semiconductor chip capacity through 2023**
 - GlobalFoundries debuted on Nasdaq this week, valued at over \$25 billion.
 - The company specializes in manufacturing the kind of less-advanced chips that are currently in short supply around the world.
 - But GlobalFoundries needs to convince public market investors that the company is riding a wave of increased demand that won't fizzle out after pandemic-related supply issues abate.
<https://www.cnbc.com/2021/10/30/globalfoundries-ceo-were-sold-out-of-semiconductor-chip-capacity-through-2023.html>
- **Supply woes catch up to smartphones**
 - Smartphone makers shipped 331.2 million units in the third quarter of the year, down 6.7 percent from 354.9 million units per year earlier, as supply chain constraints began to take effect, market research firm International Data Corp (IDC) said in a report last week.
 - "Supply chain and component shortage issues have finally caught up to the smartphone market, which until now seemed almost immune to this issue despite its adverse impact on many other adjacent industries," IDC research director Nabila Popal wrote in the report, adding that shortages are affecting all smartphone makers.
<https://www.taipeitimes.com/News/biz/archives/2021/11/01/2003767087>
- **Surges Seen in Sensors and Discrete Semiconductors This Year**
 - Worldwide sales of optoelectronics, sensors/actuators, and discretets (O-S-D) are now expected to grow 18% in 2021 to \$104.3 billion from \$88.3 billion in 2020, when this semiconductor market group increased by less than 3% during the Covid-19 virus outbreak year, according to IC Insights' October Update to The McClean Report. Total O-S-D sales are forecast to rise 11% in 2022 to \$115.5 billion (Figure 1). O-S-D products generate about 18% of the world's total semiconductor sales with the rest (82%) coming from integrated circuits. Less than 13% of semiconductor revenues came from O-S-D products 25 years ago.
<https://www.icinsights.com/news/bulletins/Surges-Seen-In-Sensors-And-Discrete-Semiconductors-This-Year/>
- **Q3 Global Semiconductor Sales Increase 27.6% Year-to-Year**
 - The SIA today announced worldwide sales of semiconductors totaled \$144.8 billion during the third quarter of 2021, an increase of 27.6% over the third quarter of 2020 and 7.4% more than the second quarter of 2021. More semiconductor units were shipped during the third quarter of 2021 than during any other quarter in the market's history.
<https://www.semiconductors.org/q3-global-semiconductor-sales-increase-27-6-year-to-year/>
- **Samsung to triple foundry capacity**
 - Earlier today, Samsung said it plans to triple its foundry capacity by 2026.
 - Samsung will be producing 3nm foundry chips in H1 2022 and expects to have a second generation 3nm process in 2023.
 - TSMC has a foundry market share of 53%, Samsung has 17% and GloFo has 6%.
<https://www.electronicsexpress.com/news/business/samsung-triple-foundry-capacity-2021-10/>
- **Apple chip shortage will end, but U.S.-China supply chain 'train wreck' is coming**
 - Apple said on Thursday it lost the equivalent of \$6 billion in sales due to chip shortages.
 - The semiconductor shortage has led to calls for more chip production within the U.S. as part of shoring up supply chains for key technology across sectors including autos.

- A larger geopolitical rivalry between the U.S. and China over technology sovereignty and tech as a national security concern poses a threat to supply chain stability that will last longer than the current global manufacturing and logistics bottlenecks.
<https://www.cnbc.com/2021/10/29/apple-chip-woes-will-end-but-us-china-supply-chain-war-just-starting-.html>

Silver

• **Here's Why You Should But the Next Dip in Silver**

- It's been a great start to Q3 thus far for the silver price (SLV), with the metal gaining 9% in barely 20 trading days, helping to claw back some of its significant year-to-date losses. The bad news is that investors parking their money in silver miners have had a lost year to follow up a lost decade in the silver producer space. The good news is that these poor returns are forcing many long-time investors and newcomers to the space to throw in the towel, creating enough bearish sentiment to increase the probability of a durable bottom and a multi-quarter rally in the metal.
<https://stocknews.com/news/slv-heres-why-you-should-but-the-next-dip-in-silver/>

• **Germany has installed 4 GW of PV so far this year**

- In June alone, new PV additions totaled 406 MW. Feed-in tariffs were reduced by another 1.4%.
- Matt: 4GW required ~3Moz of silver.
<https://www.pv-magazine.com/2021/11/01/germany-has-installed-4-gw-of-pv-so-far-this-year/>

• **Module price hike impacting middle-sized PV projects in South Korea**

- "Currently, there is no official index for solar panel prices in Korea," Kyungrak Kwon, renewables program director at Seoul-based NGO Solutions for Our Climate, told pv magazine. "However, according to industry interviews, it is understood that the panel price has increased from 10% to 15%, or from KRW340 to KRW400 per Watt (\$0.289-0.339), over the past six months."
- Matt: Recall module prices were at \$0.21/Watt as late as Q1 2020. Commodity price climbs, Chinese power shortages & supply chain issues now impacting global costs of 1MW and smaller installations.
- The current global supply chain disruption in the PV industry is delaying or making unviable many solar projects across all markets. According to a recent report from Norwegian business intelligence firm Rystad Energy, increasing module and shipping costs may cause the delay or cancellation of as much as 56% of the solar generation capacity currently planned worldwide next year.
<https://www.pv-magazine.com/2021/11/02/module-price-hike-impacting-middle-sized-pv-projects-in-south-korea/>

• **Another Chinese module maker may face WRO enforcement in the U.S., Roth Capital warns**

- Solar analyst firm Roth Capital Partners said in a note to clients that it believes LONGi may be the next module manufacturer to be the subject of U.S. Customs and Border Protection action under a Withhold Release Order (WRO) issued in June.
- "While detainment appears to have not yet happened, we believe it is imminent," Roth said in a note obtained by pv magazine. The note said that LONGi had been informed that shipments currently on the water were expected to be detained at five ports. "Look for this to impact LONGi in a broad-based way," the analyst's note said.
<https://www.pv-magazine.com/2021/11/02/another-chinese-module-maker-may-face-wro-enforcement-roth-capital-warns/>

Precious Metals Mining:

• **ARM says in talks to buy Amplats' Bokoni as PGM sector gets another consolidation push**

- In the latest consolidation move for the South African platinum industry, African Rainbow Minerals (ARM) has announced it is in discussions over the potential acquisition of the mothballed Bokoni platinum mine.

- Bokoni is located on the north-eastern limb of the platinum-bearing Bushveld geological formation where ARM operates the Modikwa and Two Rivers platinum mines.
<https://www.miningmx.com/news/platinum/47981-arm-says-in-talks-to-buy-amplats-bokoni-as-pgm-sector-gets-fresh-consolidation-push/>
- **Anglo American Appoints Duncan Wanblad as CEO to Succeed Mark Cutifani**
 - Anglo American plc (“Anglo American”) announces the appointment of Duncan Wanblad as Chief Executive, with effect from Anglo American’s AGM on 19 April 2022. Mr Wanblad, who will also join the Board of Anglo American as an executive director on the same date, succeeds Mark Cutifani who will retire as Chief Executive and step down from the Board at the AGM after nine years in the role.
<https://www.angloamerican.com/media/press-releases/2021/03-11-2021>
- **South Africa gets \$8.5 billion to phase out coal, boost renewables**
 - South Africa’s president, Cyril Ramaphosa, announced today that France, Germany, the United Kingdom and the United State will provide \$8.5 billion in funds to help the country achieve the new carbon emission targets that were presented in the Nationally Determined Contribution (NDC) brought to the COP26 conference in Glasgow, UK.
<https://www.pv-magazine.com/2021/11/02/south-africa-gets-8-5-billion-to-phase-out-coal-boost-renewables/>
- **PGM market shows strong underlying fundamentals says Implats CEO**
 - “PGM markets are experiencing heightened volatility due to global macroeconomic factors and supply-chain constraints impacting automotive production,” said Muller. “However, at Implats, we continue to benefit from robust absolute pricing for our products. “The sustained demand from our customer base is indicative of the strong underlying fundamentals for PGMs.”
<https://www.miningmx.com/top-story/47991-pgm-market-shows-strong-underlying-fundamentals-says-implats-ceo/>
- **Miners look to carbon capture to move beyond net zero**
 - Carbfix has just announced a tie-up with Rio Tinto to scale up the technology at the company’s ISAL aluminium smelter, which also sits on basalt rock formations.
 - The initial injection wells for the Coda Terminal, the world’s first mineral carbon storage hub, will be drilled next year with commercial production due in 2025.
 - Rio will benefit not only from carbon capture within its smelter and power supplier but also from the carbon credits accruing from its basalt-rich land, a significant asset in a market that is already starting to fracture between low- and high-carbon aluminium products.
<https://www.reuters.com/article/idUSKBN2HJ1TR>

E-Waste & Precious Metals Recycle Related:

- **Innovative Small Cap Extracting Platinum and Palladium Using Cleantech (on Diesel Autocat)**
 - Mineworx Technologies Ltd. has found a technological replacement for the traditional mining of precious metals. Mineworx uses its unique cleantech to economically and cleanly extract platinum and palladium from spent diesel catalysts in a new plant in Tennessee.
 - Without smelting, Mineworx will produce a concentrate for upgrading at a refinery. The company expects that it will be able to process at least 10 tonnes per day. At current PGM prices this means that revenues per plant is estimated at over \$100 million.
<https://www.streetwisereports.com/article/2021/11/05/innovative-small-cap-extracting-platinum-and-palladium-using-cleantech.html>
- **E-waste to secure a sustainable future**
 - Towards the end of 2020, the UK Government outlined its 10-point plan for a green industrial revolution. In June 2021, more than 450 investment firms also signed a letter outlining five courses of action governments around the globe should take to improve climate-related regulation and aid the

investment industry to tackle climate change. Despite the positive approaches of both initiatives, they both share one thing in common – a complete disregard for tackling e-waste.

<https://www.openaccessgovernment.org/e-waste-to-secure-a-sustainable-future/123741/>

- **Merced (California) detectives find \$200K in stolen vehicles and auto parts at recycling business**
 - Detectives arrived at Fat Cat Recycling located at 371 Highway 59 for a compliance check, according to Merced Police Det. Christian Lupian. During the check, detectives located stolen property which included a dump truck, a Case forklift, trailer as well as stolen catalytic converters and an air compressor at the facility. The dump truck is valued at \$104,000, and the total value of the stolen property recovered from the business was more than \$200,000, according to a Merced Police Department social media post.
 - According to Lupian, catalytic converter thefts are a big issue in the Merced area and it's difficult to track down stolen catalytic converters and determine what vehicles they belong to.
<https://www.msn.com/en-us/news/crime/merced-detectives-find-24200k-in-stolen-vehicles-and-auto-parts-at-recycling-business/ar-AAPZoWq?ocid=BingNewsSearch>
- **Industry anxious about mandatory recycling targets in EU battery law**
 - Requiring companies to use recycled metals in new electric vehicle batteries is necessary to prevent manufacturers from opting for cheaper, freshly mined virgin materials, the EU says. Still, the automotive sector, battery makers and the mining industry are all anxious about the upcoming EU battery regulation.
 - The mandatory recycling requirements will start at 12% for cobalt, 85% for lead, 4% for lithium and 4% for nickel in 2030, and rise to 20% for cobalt, 10% for lithium and 12% for nickel by 2035.
 - To facilitate this, the EU executive has proposed obligatory recovery targets for valuable materials to be achieved by 2026 and 2030.
<https://www.euractiv.com/section/batteries/news/industry-anxious-about-mandatory-recycling-targets-in-eu-battery-law/>
- **Elemental Holding is Building the First Car Battery Recycling Plant**
 - The recycling and reuse of metals from car batteries will lead to carbon savings of as much as 98% compared with their primary counterparts. It is therefore seen as a critical part of the transition to a low-carbon economy,” commented Michał Zygmunt, Vice-President of Elemental Holding.
 - The start of the facility is planned in 2023. It is set to be the EU’s first plant for the recycling of car batteries. It will deploy state-of-the-art technology that will allow for the recovery and green production of nickel, cobalt, lithium as well as other metals and raw materials which are essential for the lithium-ion battery value chain.
<https://wasteadvantagemag.com/elemental-holding-is-building-the-first-car-battery-recycling-plant/>

Platinum

- **Wedding market expected to lead demand for platinum jewellery – WPIC**
 - Platinum Guild International (PGI) in the US is experiencing unprecedented demand for platinum jewellery this year, as PGI US’s strategic business partners recorded an 11% increase in platinum jewellery sales in the first quarter, a 48% increase in the second quarter and a 34% increase in the third quarter, compared with the same time periods in 2020.
<https://www.miningweekly.com/article/wedding-market-expected-to-lead-demand-for-platinum-jewellery-wpic-2021-11-03>
- **2021 IPMI NY Pt Week Dinner Keynote: Platinum Group Metals: The next 15 months and the next 15 years**
 - Trevor Raymond, Director or Research for WPIC, presented an outstanding keynote on the state of PGMs. Well worth the time to listen to this presentation. Video link compliments of the IPMI.
<https://vimeo.com/user13955841/review/621565944/ab3238aa1c>

- **Growing Interest in Precious Jewellery, Especially among Millennial and Gen-Z Consumers Provides Opportunities for the Global Jewellery Industry**

- Platinum gets more attention amongst younger consumers in multiple markets
<https://platinumguild.com/growing-interest-in-precious-jewellery-especially-among-millennial-and-gen-z-consumers-provides-opportunities-for-the-global-jewellery-industry/>

Fuel Cells/Hydrogen Economy Related Articles:

- **International consortium plans green hydrogen, ammonia project in Oman**
 - The partners are planning to build a 400-MW electrolyser for the production of green hydrogen that will be running on solar and wind power from existing and new parks with a total capacity of 1 GW.
 - A consortium of Omani state-owned oil and gas company OQ, Japan's Marubeni Corp, Linde and UAE's Ducto have agreed to study the joint development of a project for the production of green hydrogen and up to 1,000 tonnes of green ammonia per day in the Salalah Free Zone in the south of Oman.
<https://www.utilities-me.com/news/international-consortium-plans-green-hydrogen-ammonia-project-in-oman>
- **Is hydrogen the future of every popular Hyundai? Why the brand's 'flexible' next-gen fuel cells will help keep internal-combustion platforms alive**
 - It's no secret Hyundai is going hard on hydrogen fuel cell (FCEV) tech, positioning itself to be able to convert internal-combustion cars across to its new FCEV drivetrains if need be.
<https://www.carsguide.com.au/car-news/is-hydrogen-the-future-of-every-popular-hyundai-why-the-brands-flexible-84980>
- **Japan automakers take the hard road**
 - Japan should not narrow its focus solely to EVs, but rather "search for options that suit Japanese circumstances," he said at a news conference hosted by the auto lobby in September. That was a rebuff to the official aim of a rapid transition to electric-powered vehicles and an end to sales of new gasoline-only vehicles by 2035. "In carbon neutrality, our enemy is carbon -- not the internal combustion engine," Toyota added.
<https://asia.nikkei.com/Spotlight/Environment/Climate-Change/Asia-s-climate-crisis/Japan-automakers-take-the-hard-road>
- **Hyzon Motors: State of competition between hydrogen fuel cells and batteries in the heavy-duty truck market**
 - FCEVs show a significant advantage over battery power for heavy-duty and mid-duty truck applications. H₂ is significantly more energy dense than batteries, which is an advantage that allows for longer driving range and heavier payloads.
 - The refueling time of H₂ is significantly shorter than battery charging time. This makes it appropriate for highly utilized vehicles, which run 2-3 shifts per day, leaving little downtime to charge. A hydrogen FCEV will take minute, up to 15 minutes for a Class 8 truck, to refuel, while an EV takes hours to recharge.
 - Lastly, FCEVs are less sensitive to cold temperatures than battery electric vehicles (BEVs). At cold temperatures, the range of BEVs can be greatly reduced.
<https://www.automotiveworld.com/news-releases/hyzon-motors-state-of-competition-between-hydrogen-fuel-cells-and-batteries-in-the-heavy-duty-truck-market/>
- **H2X to make hydrogen fuel cells, equipment in Australia**
 - H2X, a hydrogen vehicle manufacturer, has announced a deal with Gippsland Circular Economy Precinct in Australia to make a range of hydrogen-focused products. The move comes less than a week after Pure Hydrogen bought a significant stake in H2X Global.
<https://www.pv-magazine.com/2021/11/01/h2x-to-make-hydrogen-fuel-cells-equipment-in-australia/>

- **Electrifying transport: why New Zealand can't rely on battery-powered cars alone**
 - Advances in hydrogen fuel cell technologies suggest a multi-pronged strategy is a more sensible approach to decarbonisation. It also aligns well with the aim of building resilient transport systems. Electric vehicles with hydrogen-powered fuel cells have the edge on battery-driven cars in three important ways: longer range, shorter refuelling time and greater payload.
<https://theconversation.com/electrifying-transport-why-new-zealand-cant-rely-on-battery-powered-cars-alone-170703>
- **Titan's tech proven to supercharge hydrogen fuel cells**
 - The early work by the Queensland Univ. of Technology on the company's high performance, low temperature hydrogen fuel cell found that it produced significantly higher voltage compared with a standard PEM fuel cell operating at the same current density.
 - Titan Hydrogen's technology seeks to increase the capacity of fuel cells by up to 60% compared to traditional PEM fuel cells of the same power density. Common PEM fuel cells have low efficiency, converting < 40% of the energy of the supplied H₂ into electricity.
<https://stockhead.com.au/energy/titans-tech-proven-to-supercharge-hydrogen-fuel-cells/>

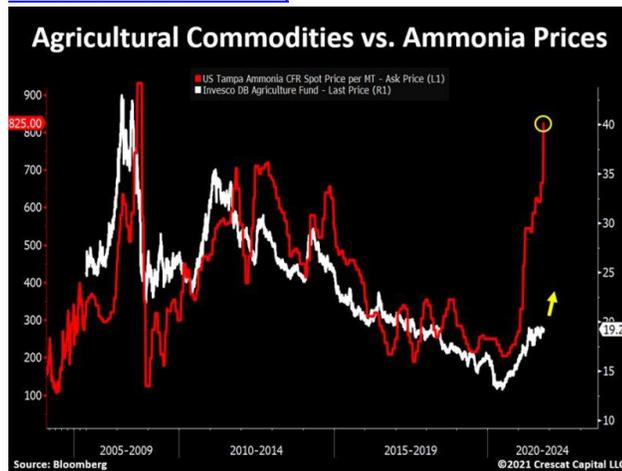
Palladium

- **Japan's auto sales slump clouds prospects of consumption rebound**
 - Japan's automobile sales slumped 31.3% in October from a year earlier to mark the fourth straight month of declines, industry data showed on Monday, a sign output cuts caused by the COVID-19 pandemic were hurting the country's already weak consumption.
<https://www.msn.com/en-us/money/markets/japans-auto-sales-slump-clouds-prospects-of-consumption-rebound/ar-AAQbaCl?ocid=BingNewsSearch>
- **Tuneable catalysis: Solving the particle size puzzle**
 - Palladium nanocrystals on aluminum oxide. Some facets enable isomerisation of 1-butene to 2-butene, others favor hydrogenation to butane.
 - The results have now been published in the scientific journal Nature Communications ("The origin of the particle-size-dependent selectivity in 1-butene isomerization and hydrogenation on Pd/Al₂O₃ catalysts").
<https://www.nanowerk.com/nanotechnology-news2/newsid=59038.php>

PGM Minor Metals (Rhodium, Iridium, Ruthenium, Osmium)

- **High-quality switches with sputtered ruthenium contacts suit low level 'dry' switching**
 - The new high-power relays are ideal for high power applications, and in many instances, can be used as an alternative to mercury wetted reed relays.
<https://www.electropages.com/2021/11/high-quality-switches-sputtered-ruthenium-contacts-suit-low-level-dry-switching>
- **Rhodium price forecast: Will deficit lift the market again?**
 - "The rhodium market is forecast to remain in deficit from 2022 to 2029 in our base case. Our reduced recycling scenario, however, results in deeper deficits through the second half of the decade with rhodium moving closer to balance by 2030."
<https://capital.com/rhodium-price-forecast-will-deficit-lift-the-market-again>
- **Ruthenium Catalyst for Habor Bosch Ammonia Process: Ammonia Prices Spiking**
 - USA Tampa Ammonia Price/mt spiking Vs. Agricultural Commodities Prices
 - Matt: 65% of Ammonia produced goes to Fertilizers. Ruthenium catalyst key to lowering the power requirements to create ammonia now more important than ever.
 - Message: Watch out agricultural food price climbs which have already started, spike coming.

https://www.linkedin.com/posts/otavio-tavi-costa-76368628_cfo-optimism-survey-just-plunged-largest-activity-6861502911768354816-Nlsg



Clean Energy General News **(New Section)**

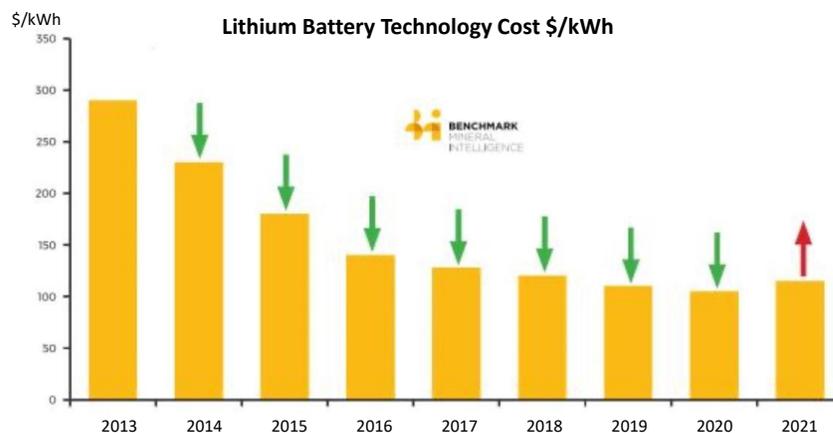
- **Biden sends the wrong message on climate change, US is a leader on lowering emissions**
 - According to the US Det. EPA, from 2005-2018 U.S. CO₂ emissions fell by 12%. During this time, the U.S. became the No. 1 energy producer in the world. We reduced our emissions by increasing production of cleaner-burning American natural gas. We created jobs, improved our economy and reduced emissions in the process. During the same period, global energy-related carbon dioxide emissions increased by nearly 24%. Europe invested heavily in renewables that were unable to support their modern economies. Russia and its inferior environmental standards expanded its "worst in class" natural gas production. Now Europe's failed "keep in the ground" policy is leading to greater imports of Chinese coal and Russian gas.
<https://www.msn.com/en-us/news/politics/biden-sends-the-wrong-message-on-climate-change-us-is-a-leader-on-lowering-emissions/ar-AAQeHAI?ocid=BingNewsSearch>
- **4 new chemical technologies that could make an impact**
 - **#1) Turning Hydrogen Into a Liquid Vehicle Fuel** - **Umicore, Anglo American, and Hydrogenious** are working to develop new catalysts to reducing the pressure and temperature needed for dehydrogenation of a liquid organic hydrogen carrier (LOHC). This process involves the use of PGMs.
 - **#2) Digesting Fluorocarbons Instead Of Destroying Them** - **Midwest Refrigerants** are starting up second pilot plant soon, and talking with strategic partners, regarding the disposal of waste fluorocarbons (air conditioner refrigerants, foam-blowing agents, lubricants, sealants, and nonstick coatings) by using a newly developed catalytic decomposition into hydrogen fluoride and other valuable raw materials.
 - **#3) A Greener Route to Ethylene** - **Clariant, Linde, and the Technical University of Munich**, are in the demonstration phase of a newly developed low emission oxidative ethane dehydrogenation process. Today Steam cracker furnaces burn massive amounts of natural gas and other hydrocarbons to achieve the temperatures of approximately 900 °C needed to break the carbon-hydrogen and carbon-carbon bonds in ethane, naphtha, and other feedstocks to make building-block chemicals like ethylene and propylene.
 - **#4) Membranes Open Up New Sources of Helium** - **Evonik Industries** has built the lead production plants to scale a new process to use Hollow-fiber membranes to economically separate helium.
<https://cen.acs.org/business/4-new-chemical-technologies-make/99/i39>
- **Elites Are Using Climate Hysteria to Immiserate the Working Class**

- Increasingly, even climate scientists are noting that the constant, and often poorly supported doomsaying threaten the credibility of the movement itself. And there have been quiet reversals; the more extreme predictions have been abandoned or walked back, even by the UN itself. And yet, in the U.S., the vast majority of young Americans continue to believe that we face imminent environmental catastrophe.
<https://www.newsweek.com/elites-are-using-climate-hysteria-immiserate-working-class-opinion-1643962>
- **Aluminium: secular shift to higher costs**
 - Behind the aluminium market gyrations, primary production costs have surged, and this has led to an acute squeeze on producers' margins. China's power market reforms could add to a secular shift towards higher costs for primary aluminium smelting. As a result, there could be profound impacts on long term supply.
<https://think.ing.com/articles/aluminium-secular-shift-to-higher-costs>
- **China's aluminium supply shortage keeps prices near 13-year high with little sign of easing amid power cuts, emission targets**
 - Production of power-intensive metals has been scaled back dramatically as nation strives to conserve electricity and reduce pollution
 - Beijing plans to peak carbon emissions by 2030, and analysts said it means more cutbacks are coming
<https://www.scmp.com/economy/china-economy/article/3154113/chinas-aluminium-supply-shortage-keeps-prices-near-13-year>
- **Maine voters reject hydropower line from Canada to New England**
 - Voters in Maine have rejected a proposal for a new power corridor carrying Quebec hydroelectricity to New England, dealing a blow to Hydro-Québec's ambitions to become a key supplier of clean energy in the U.S. Northeast. Opponents of the project, called New England Clean Energy Connect, gathered enough signatures to hold a referendum on whether to allow a 233-km, high voltage conduit from the Canadian border across western Maine to its ultimate destination in Massachusetts. A majority of those who cast a ballot voted in favour of stopping the line's construction by a margin of about 60% to 40%, according to preliminary results published by local media outlets Tuesday night.
<https://www.theglobeandmail.com/business/article-maine-voters-poised-to-reject-hydropower-line-from-canada-to-new/>

BEV / LiB Battery Market News

- **Nickel 2.0 a Happy Passenger on the Renewables Wagon**
 - Like copper, the surge in renewables is changing demand for nickel for the better.
 - So much so that global primary nickel demand is forecast to be 25% higher by the end of 2022 than it was in 2020, thanks to rising demand for renewables and some specialty steels.
<https://www.sharecafe.com.au/2021/10/15/nickel-2-0-a-happy-passenger-on-the-renewables-wagon/>
- **Indonesia signals about-face on COP26 deforestation pledge**
 - Matt: Fear over commitments to deforestation levels in light of the rapidly expanding nickel mining industry to support EV growth have officials worried about their ability to meet the accord.
 - <https://www.reuters.com/business/cop/indonesia-signals-about-face-cop26-zero-deforestation-pledge-2021-11-04/>
- **Tesla places battery grade lithium hydroxide order with Ganfeng**
 - The deal with the high-profile electric car company, announced today by Ganfeng, comes three days after Tesla reportedly placed an order with CATL for 45 GWh of lithium iron phosphate batteries.
<https://www.pv-magazine.com/2021/11/01/tesla-places-battery-grade-lithium-hydroxide-order-with-ganfeng/>
- **Vancouver lithium miner targeted in \$400M takeover battle with Chinese firm**

- Lithium Americas Corp. made a \$400 million US stock-and-cash offer for fellow Vancouver-based company Millennial Lithium Corp. on Monday, trumping a previous offer for the company made by China's Contemporary Amperex Technology Co. Ltd., or CATL.
- Millennial's main asset is its stake in the Pastos Grandes lithium mine in Argentina. Ultra-light lithium is a key component in batteries for electric cars, demand for which is exploding right now.
- The Argentinian project is believed to have enough lithium to produce 24,000 tonnes per year of battery-quality lithium carbonate for 40 years.
<https://www.msn.com/en-ca/money/topstories/vancouver-lithium-miner-targeted-in-24400m-takeover-battle-with-chinese-firm/ar-AAQeHKB?ocid=BingNewsSearch&pfr=1>
- **Nickel and a low carbon future**
 - The Nickel Institute: "The nickel our members produce is a vital part of the energy transition because it is a critical component for most renewable energy technologies and battery production."
<https://nickelinstitute.org/nickel-and-a-low-carbon-future/>
- **The era of lithium iron phosphate is expected to return globally**
 - In July 2021, the installed capacity of LFP batteries exceeded ternary lithium batteries for the first time. In September, the installed capacity of power batteries reached 15.7GWh, a y/y increase of 138.6%.
<http://www.iccsino.com/news/show-htm-itemid-15869.html>
- **Lithium ion battery prices rise for first time in gigafactory era; automakers in negotiations**
 - Several of China's major lithium-ion battery makers have written to customers setting out intentions of new pricing structures, citing the rise in cathode and anode raw material prices as well as higher costs more generally, including for non-active materials such as PVDF binder, foils, and energy.
 - Lithium carbonate has been singled out as a major driver behind the battery cell price increases. Lithium carbonate prices are presently at all-time highs and set to continue on their upward trajectory as demand continues to outstrip supply.
 - Matt: A similar cost trajectory reversal has occurred in Solar PV Module prices due to commodity price climbs.
<https://www.benchmarkminerals.com/membership/lithium-ion-battery-prices-rise-for-first-time-in-gigafactory-era-automakers-in-negotiations/>



Regards –