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BATTERY METALS

Seaborne lithium prices unchanged for sixth straight week

Lithium import prices moved sideways for the sixth consecutive week as the overall market outlook remained unchanged, although market participants were not certain whether prices had bottomed out after the prolonged bear run.

S&P Global Platts assessed battery-grade lithium carbonate and lithium hydroxide unchanged at $9,900/mt and $11,700/mt, respectively. Both assessments are on a CIF North Asia basis, based on deliveries to the main ports of China, Japan and South Korea.

Prices have fallen steeply since mid-2018 because of an increasing spodumene oversupply, cuts in China's subsidy policy for electric vehicles and the slower-than-expected deployment of nickel-rich cathodes, which particularly affected the hydroxide market since most of the new spodumene capacity was initially meant to be converted into hydroxide.

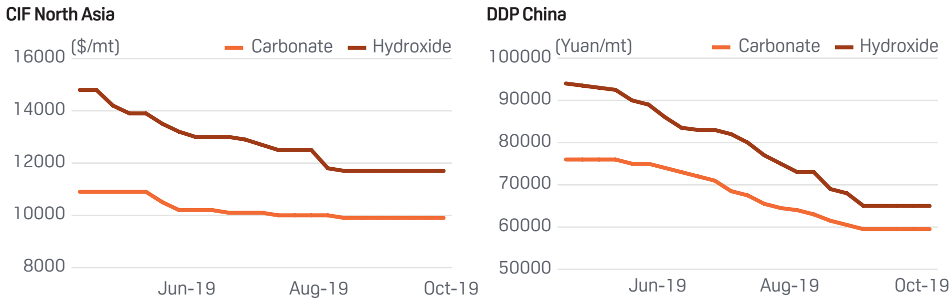
Lithium hydroxide is more suitable for nickel-rich cathodes such as NCM (nickel manganese cobalt oxide) 811 and NCA (nickel cobalt aluminum oxide) than lithium carbonate.

(continued on page 2)

BATTERY METALS

Weekly Prices		Change	Date Assessed
Lithium Carbonate			
CIF North Asia ($/mt)	9900	+0	11-Oct-19
DDP China (Yuan/mt)	59500	+0	11-Oct-19
CIF North Asia Import Parity (Yuan/mt)	79122	-3	11-Oct-19
Lithium Hydroxide			
CIF North Asia ($/mt)	11700	+0	11-Oct-19
DDP China (Yuan/mt)	65000	+0	11-Oct-19
CIF North Asia Import Parity (Yuan/mt)	93508	-3	11-Oct-19
Cobalt Sulfate			
CIF North Asia ($/mt)	8500	+650	10-Oct-19
DDP China (Yuan/mt)	59500	+500	10-Oct-19
Monthly Prices			
Lithium Spodumene			
FOB Australia ($/mt)	545	-5	30-Sep-19

PLATTS LITHIUM CARBONATE AND LITHIUM HYDROXIDE



Source: S&P Global Platts

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"So hydroxide prices shouldn't rebound before 2021 or 2022, when NCA and NCM demand goes up," said an Asian trader source who pegged battery-grade hydroxide prices at "$12,000-13,000/mt maximum" on a CIF Japan or South Korea basis.

"The cost to convert spodumene into carbonate or hydroxide is pretty much the same, so that premium that always existed [for hydroxide compared to carbonate] will go away," he added.

The trader stressed that "next year, when the market gets more active, we will probably see hydroxide prices falling until the point where technical-grade hydroxide will be at the same price of battery-grade carbonate," which he pegged at $10,000/mt CIF Japan and South Korea.

He said prices in China were much lower.

A producer source from the Americas reported that technical-grade carbonate was tradable at as high as $9,000-10,000/mt on a CIF China and Europe basis, but the trader doubted that it could be above $8,000/mt based on the current low Chinese domestic prices.

Chinese domestic lithium prices for hydroxide and carbonate were also stable this week.

Lithium carbonate was assessed at Yuan 59,500/mt DDP China (US$8,390) and hydroxide at Yuan 65,000/mt DDP China.

As such, the Chinese domestic market remains well below the seaborne on an import parity basis.

Platts' $9,900/mt CIF assessment for carbonate was equivalent to Yuan 79,122/mt, including 13% value-added tax, based on Platts' import-parity formula, while hydroxide's price of $11,700/mt was equivalent to Yuan 93,508/mt on the same basis. The dollar was assessed at Yuan 7.07170 at 4:30 pm Singapore time Friday.

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Chinese domestic lithium prices remain rangebound

Chinese domestic lithium carbonate and hydroxide prices remained stable this week for the fourth straight week, with most market participants expecting the market to remain rangebound for the remainder of the year.

S&P Global Platts assessed battery-grade lithium carbonate at Yuan 59,500/mt Friday and lithium hydroxide at Yuan 65,000/mt, both unchanged from last week. Both assessments are on a delivered, duty-paid China basis.

Some Chinese converters said there was not much room for a further drop given the support from production costs.

However, they added that lithium carbonate prices lacked the momentum to rise as demand from power ternary materials makers hadn't shown any obvious signs of recovery.

Chinese producer sources saw tradeable levels for lithium carbonate at Yuan 58,000-60,000/mt, with prices at the upper end of the range for large converters and at the lower end for smaller ones.

One producer said major converters were now selling at a loss, meaning there was not much room for a further drop.

One source said carbonate might be tradable at Yuan 57,000/mt for cash, while industrial grade carbonate was around Yuan 51,000/mt.

"Smaller converters are facing great pressure," he said.

Another producer said he had bought a shipment of Australian spodumene, but did not provide other details.

There was market chatter that some brine converters intended to adjust their prices, with some market sources concerned about whether consumers would accept any price increase.

Lithium hydroxide demand remained typically weak.

"It's useless, no matter how low the Chinese converters quoted as it can say that there is almost no demand," said a Chinese consumer.

He put the price of coarse sand at Yuan 58,000-60,000/mt and fine powder at Yuan 65,000-66,000/mt.

Producer sources, meanwhile, put coarse sand at similar levels, although said fine powder was higher at Yuan 70,000-71,000/mt.

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China and seaborne cobalt sulfate prices firm further post-holiday

Chinese domestic cobalt sulfate prices continued to edge up after the week-long Chinese national day holiday (October 1-7), as domestic producers maintained their high offers amid stable demand.

S&P Global Platts assessed cobalt sulfate with 20.5% cobalt content at Yuan 59,500/metric ton delivered, duty-paid China Thursday, up Yuan 500/mt from October 3.

Tradable values were indicated at Yuan 60,000/mt this week and the volume of transactions was low since buyers were cautious about placing orders after coming back from the holiday, market sources said. A Chinese trader said the lowest offer was around Yuan 60,000/mt and tradable value could be slightly lower. She expected the price to continue to go up at least in the near term.

Some market participants said there might not be any significant drop in cobalt sulfate prices before December as inventories are not high and demand remains relatively stable at present.

Most Chinese producers maintained their offers at Yuan 60,000-62,000/mt this week. A major Chinese producer quoted as high as Yuan 68,000/mt and was unwilling to sell even at Yuan 62,000-63,000/mt, said a company source.

A second Chinese producer worried that cobalt sulfate prices might come under downside pressure in the remainder of this year as it is not clear whether the ternary materials makers will stock up in large quantities ahead of year-end.

Meanwhile, seaborne prices also extended their upward trend due to the continuous rise in cobalt metal prices. Some Chinese market participants voiced concerns that cobalt metal prices might undergo a correction soon.

The Platts seaborne 20.5% Co cobalt sulfate assessment was at $8,500/mt CIF North Asia, up $650/mt from a week earlier.

The first Chinese trader said that she indicatively quoted at $8,700/mt FOB China for 20.5% Co cobalt sulfate converted on current domestic prices.

A Western producer raised his offer to $9,500/mt this week. He said that deals could even be concluded at $9,450/mt. He didn't expect any significant drop in cobalt prices as traceable cobalt might see structural supply tightness next year.

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Global EV sales in August down 9% on year, led by China, US

Global sales of electric vehicles fell for the second straight month in August, with a 9% year-on-year decline led by China and the US, S&P Global Platts Analytics said Wednesday in its monthly EV Essentials report.

Global sales of plug-in electric vehicles (PEV) in August totaled 166,100 units.

PEV sales growth was down 16% in China and 27% in the US, with the EU market up 31%, according to the report.

"[The fall] in Chinese sales reflects a correction from the June surge associated with anticipation of subsidy rollbacks," the report said.

Since the inception of subsidies in 2010, China has been gradually tweaking and tapering, intending to phase out subsidies completely in 2020. To qualify for a tax break, a vehicle must be able to travel at least 250 km on one charge.

PEVs accounted for 1.5%, 2.8% and 4.9% of light-duty sales in the US, EU and China, respectively, in August.

"Weakness in US sales reflects, in part, low model availability," said Platts Analytics senior transportation technology analyst Zane McDonald. "40% of major auto brands in the US do not offer any PEV option, with an additional 35% only offering one. We suspect this effect to fade moving into 2020 with nearly 20 new or updated PEV models expected to hit the US market by year-end."

European EV sales were up 40% year on year in first-half 2019 at 198,000 units.

"August's falling global electric vehicle sales are a reminder that technological shifts do not happen smoothly," independent analyst Matthew Turner said. "But I do not think it offers too many clues as to the future. The EV market remains small and still heavily dependent on subsidies, meaning sales trends are erratic. Sustained sales growth will come with new model launches, and there are plenty to come in 2020 and 2021."

— Ben Kilbey, ben.kilbey@spglobal.com

Glencore signs five-year deal to sell cobalt to China's GEM

Global diversified natural resources company Glencore has entered into a five year agreement for the supply of cobalt to Chinese firm GEM Co., Glencore said Monday.

Under the terms of the agreement, Glencore will provide a minimum of 61,200 mt of cobalt to GEM between 2020 and 2024, the company said.

"This long term partnership provides Glencore with a stable outlet for a significant portion of its expected future Cobalt Hydroxide production," Glencore's head of marketing, Copper & Cobalt, Nico Paraskevas said in a statement.

Last August, Glencore said it would close its Mutanda copper/cobalt mine in the Democratic Republic of Congo at the end of this year.

The announcement of the idling of the world's largest cobalt mine resulted in cobalt price increasing by 30%.

A market source said that this move proves that even as battery manufacturers try to whittle down the amount of cobalt in each battery, the sheer volume of batteries needed for the electric vehicle revolution means that large quantities of the metal need to be locked in to hedge for future growth.

"You can get the amount down to 0.001% per battery, but you're still going to need a lot of cobalt," he said.

Back in May Glencore entered into a long-term cobalt hydroxide agreement with European recycler Umicore, which is continuing to build out its battery-metal offering.

The cobalt will be sourced from Glencore's mining operations, KCC and Mutanda in the DRC. Umicore has assessed each operation as fully compliant with its sustainable procurement framework for cobalt which excludes artisanally mined cobalt from its supply chain, as well as any form of child labor, a joint statement said.

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UK tech firm Dyson pulls plug on $3 billion EV project

UK-based technology company Dyson said late Thursday that it is canceling its GBP2.5 billion ($3 billion) electric vehicle project, just as the major automakers ratchet up their own EV plans.

In an email to employees, the tech company's boss, James Dyson, said the project had failed to attract the interest of a buyer and has become commercially unviable.

The news represents an about-turn at exactly the time all of the major auto manufacturers are ploughing billions of dollars into the EV revolution in a bid to beat mounting carbon dioxide regulations and curb emissions.

However, the news doesn't mark a move away from the EV sector entirely, as Dyson said the business will continue to focus on next-generation battery technology, including solid state batteries.

"Our battery will benefit Dyson in a profound way and take us in exciting new directions. Our investment appetite is undiminished and we will continue to deepen our roots in both the UK and Singapore," Dyson said in the email.

Global sales of EVs fell for the second straight month in August, with a 9% year-on-year decline led by China and the US, S&P Global Platts Analytics said Wednesday in its monthly EV Essentials report. Global sales of plug-in electric vehicles (PEV) in August totaled 166,100 units.

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Western Australia's Port Hedland lithium exports fall in September

Port Hedland in Western Australia saw exports of lithium concentrate drop 4.5% month on month in September, coinciding with stabilizing seaborne lithium prices.

According to the port's September statistics, 21,300 mt of spodumene concentrate was delivered in September via three shipments, down from the 22,300 mt of spodumene concentrate exported during August in two shipments.

Although no spodumene concentrate was exported a year ago, the volume was some 89% below the 201,499 mt of spodumene direct shipping ore (DSO) exported from Port Hedland in September 2018.

According to historical data, all lithium exported out of Port Hedland has been destined for China.

Lithium prices were stable throughout September, with lithium carbonate not moving from the $9,900/mt CIF North Asia level reached at the end of August and the lithium hydroxide price also stuck at $11,700/mt CIF North Asia during the same period.

In August, lithium hydroxide prices lost $800 from $12,500/mt CIF North Asia at the start of the month, whole carbonate prices edged $100 lower from $10,000/mt CIF North Asia on August 2.

So far this year, 211,272 mt of lithium has been shipped from the port of Port Hedland to China, 200,272 mt of concentrate and 11,000 mt of DSO.

The total was 90% below the total volume exported in the first nine months of 2018. The port only started distinguishing between spodumene DSO and concentrate in June last year.

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Cornish Lithium aims to secure sustainable UK supply chain

The UK and Europe both need battery supply chains, from mine to manufacturing, in order to make the electric vehicle revolution a carbon-neutral success, Cornish Lithium CEO told S&P Global Platts Tuesday.

The battery business is leaving a hefty carbon footprint, with ore being dug up in South America and Australia and then shipped thousands of miles to be processed in China. But as consumers and investors become more environmentally savvy, so too does the need for companies to make sure they are on top of their game, CEO Jeremy Wrathall said.

Part of this includes making a supply chain closer to home, where possible powered by renewables, he added.

Cornish Lithium, currently a developer with eyes on becoming a producer in around five years, believes it is well positioned to address such Environmental, Social and Governance (ESG) concerns and create a business that not only powers the EV revolution but also operates on a low C02 emission framework, Wrathall said.

"The carbon footprint caused by shipping ore thousands of miles needs to be addressed," Wrathall said, adding that Cornish Lithium will operate on new technology whereby geothermal water is "filtered" for lithium using modern Direct Lithium Extraction (DLE) technology.

Wrathall said ESG is possibly the most important topic these days and that often talks with investors focus not on how much money a company is making, but rather what is its ESG strategy.

Last week, Platts reported that Cornish Lithium had completed a GBP1.4 million ($1.7 million) fund raising via Crowdcube in an attempt to make a sustainable lithium supply chain in the UK.

Skirting traditional avenues for raising investment cash, Cornish Lithium has enlisted 1,200 new stakeholders via the crowdfunding platform. Many of these stakeholders are based in Cornwall in the southwest of England.

The move is believed to be the first successful crowdfunding campaign by a British mineral exploration company, offering a role in securing strategic UK mineral supplies.

Wrathall said that this represented a new route, with traditional avenues starting to be troublesome not helped by current market conditions.

"This [crowdfunding] allowed us to connect to an audience we never had before," he said, noting that it made the whole process more personal. "Knowing who your crowd is, is of huge significance [in this day and age]."

Raising funds for lithium projects hasn't been helped throughout 2019 as the price has been hammered lower by a variety of factors.

"The US/China trade war is the biggest problem, [and] EV sales have not been as good as they could be," the CEO said.

However, it is widely recognized that the EV movement is coming and that when it does it will require a lot of high grade lithium.

Also, the less money being invested the less metal further out, which could create a bull scenario, according to sources.

"There's definitely a bullish story coming, the problem currently is for companies that are in production now or about to go into production. We're around five years away, when things will likely be much more positive," Wrathall said.

On the testing subject of Brexit, Wrathall was bullish his own story.

"We're Brexit-proof, if we do or don't we still need to create new industry in the UK," he said.

He said he hopes that, with the large-scale of mining rights that Cornish Lithium holds, and the potential for a UK battery supply chain, the company could create "significant" jobs in the area.

The UK's opposition Labour Party recently pledged to invest GBP1.8 billion in collaboration with private investors to build three factories to produce electric batteries, in Stoke, Swindon and south Wales, and would invest GBP500 million in four reprocessing plants to reprocess cobalt and other minerals used in battery production.

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Australian Mali Lithium's Goulamina project risks reduced with water license

West Africa-focused Australian miner Mali Lithium has received a water license from the Malian Authorities for the Goulamina lithium project, sanctioning the company to pump water from the nearby Selingue Dam, de-risking the project water supply, the company said Monday.

Sydney-listed Mali Lithium's Goulamina lithium project is reported to be the world's largest uncommitted hard rock lithium reserve, the company said.

Goulimina has a probable ore reserve of 31.2 million mt grading 1.56% Li2O3 for a 16-year mine life.

The company said it is currently completing its definitive feasibility study.

"Mali Lithium also released metallurgical test work results on 17th September reporting results with 80% overall recovery in the lab indicating that actual plant performance of 70% as used in the PFS (preliminary feasibility study) should be improved on," analysts at investment group SP Angel said in a note Monday.

Chinese processing plants now prefer a coarser grain of spodumene over finer grain lithium and have been refusing spodumene concentrate shipments which do not suit their process plants, SP Angel said.

"While we can check the mineralogy of the spodumene ore for grain size we really need to see positive indications from consumers following bulk sample processing to better de-risk this element of the project," the investment group said.

SP Angel added that China Minmetals Corp is to test ore from Goulamina at its lab in Changsha and is set to expand its relationship with Mali Lithium.

China Minmetals signed a letter of intent with Mali Lithium in December 2018.

China Minmetals is a Chinese government-owned $470 billion company with considerable research, funding, offtake, engineering and construction capability, according to Mali Lithium's Managing Director, Chris Evans.

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Lithium-ion battery developers win Nobel Prize for chemistry

The Nobel Prize for chemistry has been awarded this year to three scientists for the development of lithium-ion batteries.

The Royal Swedish Academy of Sciences Wednesday awarded the prize to John Goodenough, Stanley Whittingham and Akira Yoshino for their collective work in developing the lightweight, rechargeable and powerful batteries that "laid the foundation of a wireless, fossil fuel-free society, and are of the greatest benefit to humankind."

Whittingham, a professor at Binghamton University, New York, laid the foundation for the batteries in the 1970s when he worked on developing methods that could lead to fossil fuel-free energy technologies during the oil crisis.

He created a cathode in a lithium battery made from titanium disulphide which, at a molecular level, has spaces that can house, or intercalate, lithium ions. But his battery was too explosive to be viable, as the anode was partially made from reactive metallic lithium.

Goodenough, Cockrell chair in engineering at the University of Texas at Austin, built on Whittingham's work by predicting that it would be better for the cathode to be made using a metal oxide instead of a metal sulphide. In 1980, he found that cobalt oxide with intercalated lithium ions could produce more powerful batteries.

Yoshino, who is now a honorary fellow at Asahi Kasei Corporation in Tokyo and a professor at Meijo University, Nagoya, then used Goodenough's cathode as a basis to create the first commercially viable lithium-ion battery in 1985 using petroleum coke as the anode, as it could still intercalate lithium ions.

The Swedish academy said the benefit of lithium-ion batteries was that they were based on lithium ions flowing back and forth between the anode and cathode, rather than on chemical reactions that break down the electrodes.

"Lithium-ion batteries have revolutionised our lives since they first entered the market in 1991," it said.

The laureates will share the Swedish Krone 9 million ($905,000) prize amount between them.

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Global trade tensions weigh on copper, boost gold: S&P Global Ratings

Demand for industrial metals is likely to remain under pressure over the next couple of years, against the backdrop of ongoing trade tensions between the US and China, with gold prices well supported as a result, S&P Global Ratings said in a report Thursday.

S&P Global Ratings said the probability of a near-term global recession is "relatively modest", around 30%-35%, although this metric has doubled from a year ago.

It added that geopolitical tensions are likely to continue to dent growth prospects, and fuel volatility in commodity prices.

"We've revised down our assumptions for copper, given demand softness in the context of faltering global economic growth," Simon Redmond, senior director, sector lead, extractive industries, at S&P Global Ratings said. "Political and trade tensions are hitting investment plans and confidence -- this is in spite of likely supply deficits for copper in the coming years. Gold, on the other hand, is benefiting from both these trade uncertainties and the 'lower for longer' expectations for interest rates."

S&P Global Ratings forecasts the copper price to average around $6,000/mt for the rest of 2019 and 2020, and $6,100/mt in 2021.

The London Metal Exchange three-month spot price was bid around $5,740/mt in Thursday afternoon trading. The contract hit a year-to-date high of $6,608.5/mt in April, having started the year at $5,970/mt.

Ratings is forecasting an average 2019 gold price of $1,450/oz and $1,400/oz in 2020/21. Bullion was spot bid around $1,500/oz Thursday afternoon.

"Our assumptions are modestly below prevailing prices; we incorporate the potential for market sentiment to quickly change and lead to short-term volatility," the report said. "We also believe prices beyond 2021 will average $1,300/oz, trending toward what we consider a long-term average level."

Limited nickel gains

S&P Ratings said the upside to nickel could be limited. The metal has been supported throughout 2019 following revised export regulations from Indonesia, one of the world's biggest suppliers.

"We currently believe the major bullish impact is likely to be relatively short term, with market stabilizing through 2020," the report said. "The demand stemming from the stainless steel industry, though showing supporting healthy statistics recently, is susceptible to fluctuations driven by trade tensions, and we deem the current level of nickel prices to be unsustainable for the steel producers."

S&P Ratings sees nickel prices averaging $17,000/mt for the remainder of 2019, $15,000/mt in 2020, $15,500/mt in 2021 and $16,000/mt in 2022.

The three-month LME nickel spot price was bid around $17,620/mt Thursday.

Nickel's main usage is in the stainless steel sector, which S&P Global Market Intelligence says could be under pressure in 2020 and correct lower.

"In 2020 we expect Chinese stainless steel output to subside as a result of falling PMIs and volatility in the macroeconomic environment caused by the trade dispute between China and the US," Market Intelligence commodities analyst Thomas Rutland told Platts.

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Battery Metals weekly wrap

It was a week of mixed emotions for the battery business, with Dyson stepping back from its electric vehicle dream -- in part at least, as other autos stepped up the offensive.

UK-based technology company Dyson is canceling its GBP2.5 billion ($3 billion) EV project, just as the major automakers ratchet up their own EV plans.

One source said he wasn't surprised at the news. "It seemed to be a bit of a PR stunt," he said.

PR stunt or not, Dyson isn't ejecting itself completely from the EV race. It will continue to focus on next-generation battery technology, including solid-state batteries.

Global EV sales fell for the second straight month in August, with a 9% year-on-year decline led by China and the US, S&P Global Platts Analytics said Wednesday in its monthly EV Essentials report. Global sales of plug-in electric vehicles (PEV) totalled 166,100 units in August.

"August's falling global electric vehicle sales are a reminder that technological shifts do not happen smoothly," independent analyst Matthew Turner said. "But I do not think it offers too many clues as to the future. The EV market remains small and still heavily dependent on subsidies, meaning sales trends are erratic. Sustained sales growth will come with new model launches, and there are plenty to come in 2020 and 2021."

And new models are being lined up thick and fast.

French automaker Groupe PSA, most famous for its Peugeot brand, will launch 15 EV models over the next two years, it said Friday.

The carmaker was also adamant that for the EV story to be a success -- ultimately achieving a reduction in CO_2 emissions -- companies and governments most come together and promote the nascent industry.

"Through the trade body the Society of Motor Manufacturers & Traders, Groupe PSA is working collaboratively with other OEMs and government on the support packages needed to bring about mass market change," a statement read.

It added that in order to appeal to the mass market, there needs to be stronger and more long-term consumer incentives, improved infrastructure and information on accessibility, and a solid consumer understanding of both terminology and total costs of ownership.

"And they need to be cheaper," chipped in one analyst. "I want to own an EV, but the tech just isn't there yet, not at my price point anyway."

SEAT was making a stir on the racing circuit this week, launching the world's first fully-electric touring car. And the thing is rapid.

The CUPRA e-Racer has a top speed of 167 mph, and hit 62 mph in 3.2 seconds.

"Aside from its batteries [weighing in at 400kg], the new race car resembles existing touring car race machines – albeit with even more power delivered in near silence," a statement read.

I think I'd like to hear this beast coming.

Test driver, Mattias Ekstrom, a rally champion, said: "I think the biggest challenge is getting used to driving with no gearbox and without the roar of the engine as a reference for knowing, for example, how fast to go when taking curves."

Until next week readers, stay charged. .

— *Ben Kilbey, ben.kilbey@spglobal.com*