S&P Global
Platts

# METALS DAILY

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BATTERY METALS

## Seaborne lithium bear-run lets up but sentiment still negative

Seaborne lithium prices remained static this week, although some market participants remained bearish for the coming months.

After three sequential falls, Platts' lithium hydroxide CIF North Asia weekly assessment remained stable Friday at $13,000/mt, while lithium carbonate held at $10,200/mt. Both assessments refer to battery-grade quality products delivered in the main ports of China, Japan and South Korea .

Lithium hydroxide has been under more pressure than lithium carbonate because of an oversupply of spodumene , which is more frequently converted into hydroxide, while carbonate is usually upgraded from brines.

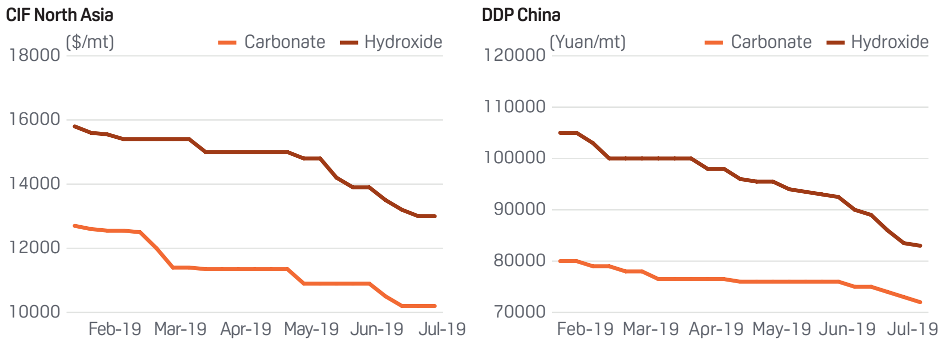
New spodumene projects, such as those owned by Pilbara Minerals and Altura Mining in Australia, started commercial operations this year, but demand from converters has been slower than expected. This has led Pilbara to announce in mid-June that "production at [their] Pilgangoora [spodumene project] will be moderated during June and July."

(continued on page 2)

### BATTERY METALS

| | Weekly prices | Change | Date assessed |
|---|---|---|---|
| **Lithium Carbonate** | | | |
| CIF North Asia ($/mt) | 10200 | 0 | 05-Jul-19 |
| DDP China (Yuan/mt) | 72000 | -1000 | 05-Jul-19 |
| CIF North Asia Import Parity (Yuan/mt) | 79180 | -58 | 05-Jul-19 |
| **Lithium Hydroxide** | | | |
| CIF North Asia ($/mt) | 13000 | 0 | 05-Jul-19 |
| DDP China (Yuan/mt) | 83000 | -500 | 05-Jul-19 |
| CIF North Asia Import Parity (Yuan/mt) | 100916 | -73 | 05-Jul-19 |
| **Cobalt Sulfate** | | | |
| CIF North Asia ($/mt) | 7200 | -100 | 04-Jul-19 |
| DDP China (Yuan/mt) | 36500 | -1500 | 04-Jul-19 |
| **Lithium Spodumene** | | | |
| 6% Spodumene Concentrate FOB Australia ($/mt) | 600 | -15 | 28-Jun-19 |

### PLATTS LITHIUM CARBONATE AND LITHIUM HYDROXIDE

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One market participant, based in the Americas, pegged the tradable value for lithium carbonate at $11,000/mt "or below" and at $12,000-$13,000/mt for lithium hydroxide, both on a CIF North Asia basis.

"There is too much spodumene capacity and low conversion capacity [into hydroxide or carbonate] — if it wasn't for this bottleneck, lithium prices would be falling even more," he said.

A Chinese consumer source, who had not heard of any trades below $9,000/mt, said he was not importing because domestic prices were more attractive.

Chinese domestic lithium carbonate and hydroxide prices fell another Yuan 1,000 and Yuan 500, respectively, this week to Yuan 72,000/mt and Yuan 83,000/mt.

An Americas -based producer had not seen sales of carbonate below $10,000/mt outside China. He said battery-grade carbonate could be sold at around $13,000/mt CIF in the US and Europe, with hydroxide likely to trade at $15,000/mt on the same basis.

He added that prices in Japan and South Korea would be around $1,000/mt below these levels on a CIF basis.

A European consumer source confirmed the spot prices, especially those in the Chinese market, were lower than those of term contracts signed at the beginning of the year.

He agreed that lithium carbonate could be tradable at $13,000/mt on a CIF Europe basis.

The Platts $10,200/mt CIF mark for carbonate was equivalent to Yuan 79,780/mt, including 13% VAT, based on the Platts' import-parity formula, while hydroxide's price of $13,000/mt was equivalent to Yuan 100,916/mt on the same basis. The Yuan was assessed at 6.8697 to the dollar at 4:30 pm Singapore time Friday.

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## Chinese domestic lithium prices fall as producers lower offers

Chinese domestic lithium carbonate and hydroxide prices continued to decline this week as producers lowered prices in an attempt to secure orders in response to weakening demand.

S&P Global Platts assessed battery-grade lithium carbonate at Yuan 72,000 ($10,445)/mt Friday, down Yuan 1,000 from June 28, while lithium hydroxide dropped Yuan 500 to Yuan 83,000/mt. Both assessments are on a delivered, duty-paid China basis.

Sources said panic sentiment was prevailing, although a Chinese producer felt it was possible there would be a slight rebound in prices before October.

However, most market participants doubted there would be any factors supporting a rally after the seasonal lull, with the downtrend expected to continue, but capped by production costs.

A consumer expected orders from cathode materials producers to be better in July than June when their output fell 29% from May. He said some players expected prices to resume an upward trend in late August and in September, but said that "the new energy market is running into downturn."

A few producers in China said it was difficult to secure orders at the Yuan 72,000-73,000/mt level, with one saying end-users were bidding below Yuan 70,000/mt and brine producers were selling at Yuan 68,000/mt.

A supplier reported selling lithium carbonate as low as Yuan 68,000/mt, as he had "just started the business and wants to attract more orders" amid declining demand.

Another Chinese producer said, with demand so sparse, he would rather not sell if prices were too low. However, he had lowered his offers to Yuan 71,000/mt after no orders were secured at the Yuan 72,000/mt level. "End-users are driving a hard bargain now and some aim to bid below Yuan 70,000/mt … I can't sell at Yuan 70,000/mt," he said, adding that he had heard of some recyclers and lepidolite producers selling at Yuan 67,000-68,000/mt because of lower production costs. Another Chinese producer was optimistic that lithium carbonate prices would climb back before October to around the Yuan 75,000/mt level. "Our cathode materials clients — those ranking in top 10 — are still digesting their stocks now. Those with a better operating situation will not purchase until the end of July, while those with a worse situation will not purchase until the middle of August," he said.

Driven by the decline in battery-grade lithium carbonate prices , industrial grade lithium carbonate prices also dropped, with tradable levels for industrial grade lithium carbonate indicated at Yuan 65,000-66,000/mt this week.

One Chinese producer had heard some distributors were clearing inventory at a loss.

Meanwhile, domestic lithium hydroxide prices held up slightly better than carbonate, even though they have for the ninth straight week.

A consumer placed reasonable hydroxide coarse sand levels at Yuan 80,000-82,000/mt and hydroxide fine powder at below Yuan 90,000/mt, although a Chinese producer said there was no demand and coarse sand was at the lower end of the range and fine powder at Yuan 87,000-88,000/mt. "I previously expected Q4 might be better than Q3, but now doubt whether there will any factors supporting a rally at that time," he said. Although he described the market as "very bleak," his company had no plans to cut production.

Another Chinese producer placed industrial grade coarse sand at Yuan 72,000-74,000/mt, but said it was possible sellers might sell battery-grade coarse sand as low as Yuan 75,000-76,000/mt to meet their monthly sales target. However, this price would not be repeatable.

He saw prices taking a pause from further declines in late August or September, although said it was hard to see a price rally without the support from the demand side.

Two other producer sources said it was useless to lower prices below Yuan 80,000/mt as there was no buying interest.

Despite the "bleak demand," one producer said other factors, such as production costs, were keeping prices from a further big drop. But he also did not expect anything to support a rally. Chinese domestic lithium carbonate and hydroxide prices continued to fall this week as producers lowered prices , attempting to secure orders in response to weakening demand.

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## Cobalt sulfate prices drop for fourth week; producers halt sales

Chinese domestic and seaborne cobalt sulfate prices continued to drop for the fourth consecutive week, as demand remained stagnant and some producers halted sales in the open market to minimize losses.

S&P Global Platts assessed cobalt sulfate with 20.5% cobalt content at Yuan 36,500/mt delivered, duty-paid China Thursday, down Yuan 1,500/mt from June 27, while the seaborne market was assessed at $7,200/mt CIF North Asia , down $100/mt from last week.

Two producers told Platts they had halted sulfate sales because of the low prices, with one saying his company had also halted production, while a third had cut production.

A recycling producer said the market was in "chaos," with large producers under pressure and clearing their stocks at lower prices, while small producers were reluctant to sell at the current low prices, as they would suffer losses. "As oversupply is there and demand is shrinking, you cannot assure that all producers won't choose to sell at lower prices," he said.

A producer said he didn't think large producers could make deals at Yuan 35,000/mt and had heard tradable values at Yuan 37,000-38,000/mt, which other producers agreed with. "It's difficult to receive orders," he said, adding that his company's price always seemed to be higher than average.

"End-users don't want to pay if the prices are not satisfactory. The whole value chain is running into a downturn," the producer said. However, he said earlier in the week that his company had not yet cut output and had sold out of available stock due to its stable relationship with end-users.

One producer wondered whether the landslide accident at Glencore's Kamoto Copper Company's KOV open-pit copper and cobalt mine in the Democratic Republic of Congo last week could provide some support to falling prices , although this was not mentioned by anyone else.

A Chinese consumer said the shrinkage in orders from cathode material makers could be seen in China's June ternary cathode materials output numbers representing 36 producers. The June figure dropped 29% from May to 13,300 mt, although this was up 29.4% year on year, according to data from Chinese consultancy RealLi Research.

Sources said that, due to the weaker demand from end-users and volatile raw materials prices, cathode materials producers had preferred make-to-order production in June to relieve the pressure from production costs and reduce the pileup of stocks.

RealLi expected the figure to continue to drop in July, although a consumer said that, while it was "reasonable to see that cathode materials output dropped by 29% month on month in June," he thought orders should be better in July.

Output for the first six months of 2019 totaled 97,100 mt, up 56.2% year on year.

In the seaborne market, one exporter said he had offered at $7.95/kg CIF North Asia.

Amid lingering negative sentiment, market sources were unsure when there would be a respite to falling prices.

Some players expected prices to start trending upwards in late August and September, although others doubted demand in these two months could lend any support, with an exporter saying "it seems that there's no hope in the latter half of this year".

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## China's CATL to boost investment German EV battery factory

Chinese battery maker CATL plans to increase its investment in its electric -vehicle battery factory in eastern Germany to €1.8 billion ($2 billion), CATL's Europe chief Matthias Zentgraf told state broadcaster MDR.

Construction of the plant, which would be CATL's first factory outside China , is due to start in September, the broadcast said.

The factory is being built to supply batteries to BMW and other automakers, with BMW having ordered several billion euros worth of batteries from CATL.

CATL first announced plans to invest €240 million by 2022 in a factory near Erfurt in the German state of Thuringia last July.

The plant was set to have a capacity of 14 GWh and employ 600 people during the first phase, Thuringia's government said last summer.

Meanwhile, Germany's federal government plans to raise domestic EV battery production with €1 billion in subsidies.

The plans are part of the so-called European battery alliance, with France and Germany planning to raise up to €6 billion of investment for three projects involving car makers PSA, Opel and battery maker Saft, the countries' economy ministers said in May.

Northvolt recently secured $1 billion to finance construction of Europe's first "home-grown" lithium -ion factory, in Sweden .

Germany's government has increased pressure on its automakers to invest heavily in EVs as well as battery production in Europe

Germany has targeted having up to 10 million EVs on its roads by 2030 to help meet the transport sector's climate targets with the government planning major climate policy decisions in September.

Only 100,000 purely battery-powered EVs are currently registered, but monthly sales trends show 50% year-on-year gains as Europe's biggest auto market is catching up with early adopter Norway .

Both markets were running neck and neck in the first quarter with 23,000 units sold, S&P Global Platts Analytics said in its monthly EV Essentials report.

As Europe continues to position itself in the global EV market, it needs to become more independent and develop a fully integrated domestic supply chain, according to Infinity Lithium .

In an interview with S&P Global Platts, Vincent Ledoux Pedailles, an executive director at Infinity Lithium , said it would be "very difficult, or even impossible, for Europe to catch up with China " and, instead, it must focus on its own strengths and develop domestically.

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## Large scale EV battery production needed in UK: Jaguar Land Rover

Jaguar Land Rover believes a "giga-scale" battery production plant should be built in the UK in order to protect jobs and keep the country at the forefront of the electric -vehicle revolution, the company said Friday.

The suggestion came at the same time as the auto maker announced that it will build a range of EVs at its manufacturing plant in Castle Bromwich in the UK , which it said will safeguard thousands of jobs.

Production will commence in 2020, and although the company is bullish about its own electrification plans, it still has reservations as to how quickly the general population will adopt EVs.

According to Society of Motor Manufacturers and Traders (SMMT) data published Thursday, in June sales of battery-only electric cars were up 61.7% year on year, but plug-in hybrid sales continued to plummet, dropping 50.4% and taking total growth in sales of alternatively fuelled vehicles into negative territory for the first time since early 2017.

SMMT chief executive Mike Hawes was critical of the government's approach, saying: "Manufacturers have invested billions to bring these vehicles to market, but their efforts are now being undermined by confusing policies and the premature removal of purchase incentives. If we are to see widespread uptake of these vehicles, which are an essential part of a smooth transition to zero emission transport, we need world-class, long-term incentives and substantial investment in infrastructure."

Jaguar is also calling for the government to act, working alongside industry to bring a "giga-scale" battery plant to the UK . "These critical steps will also support and grow the existing supply chain, making the UK less dependent on essential materials sourced abroad today," it said in a statement.

Ralf Speth, CEO of Jaguar Land Rover, said: "Convenience and affordability are the two key enablers to drive the uptake of electric vehicles to the levels that we all need. ...Affordability will only be achieved if we make batteries here in the UK , close to vehicle production, to avoid the cost and safety risk of importing from abroad. The UK has the raw materials, scientific research in our universities and an existing supplier base to put the UK at the leading edge of mobility and job creation."

Talking to S&P Global Platts this week, lithium project developer European Metals ' CEO Keith Coughlan said: "I think that the move to EVs is now irreversible. It just becomes a matter of the speed," adding that original equipment manufacturers need to have better investments in the battery supply chain.

Talk of a UK battery plant comes hot on the heels of Chinese battery maker CATL saying that it plans to increase its investment in its EV battery factory in eastern Germany to €1.8 billion ($2 billion).

Construction of the plant — CATL's first factory outside China # — is due to start in September. The factory is being built to supply batteries to BMW and other automakers, with BMW having ordered several billion euros worth of batteries from CATL.

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## Australia forecasts sharp fall in lithium prices by 2021

Australia is expecting lithium and alumina prices will fall in the next two years while aluminum prices are expected to rise, the country's Department of Industry, Innovation and Science said Monday.

The price for spodumene — the precursor material for lithium hydroxide — is expected to drop to $672/mt in 2019, down from $782/mt in 2018, and then fall further to $616/mt in 2020 and $517/mt in 2021.

"The fall in prices has been led by China , where price drops have been large enough to more than offset stable or rising prices in other countries," the department said.

World production of lithium carbonate equivalent is likely to rise to 403,000 mt this year from 384,000 mt in 2018, and then climb to 420,000 mt in 2021. Consumption is tipped to rise from 234,000 mt in 2018 to 264,000 mt in 2019 and then to 349,000 mt by 2021, it said.

Meanwhile, alumina prices are estimated to fall to $374.8/mt in 2019 from $482.3/mt in 2018 and then to $347.7/mt by 2021. Aluminum prices are expected to drop to $1,879/mt in 2019 from $2,159/mt last year, before climbing to $1,928/mt by 2021, it said.

World production of aluminum is expected at 65.79 million mt this year, up from 64.41 million mt last year, and then rising to 70.71 million mt in 2021.

Australia's copper production is expected to reach 1 million mt in fiscal 2019-2020 (year to June 30), up from 941,000 mt in 2018-2019, according to the government report. Exports of copper ore and concentrate are expected to reach 2.2 million mt in 2019-2020 from 1.9 million mt the year before.

Australia's nickel output is likely to rise to 212,000 mt in fiscal 2020-2021 from 150,000 mt in 2018-19, the department said, noting a revived interest in nickel production had spurred investment in nickel projects.

Australian's nickel export volumes are expected to rise to 271,000 mt in 2019-2020 from 221,000 mt in 2018-2019.

Australian zinc production is anticipated to rise slowly by 8.5% in 2019-2020 to 1.42 million mt after a 38.4% annual surge to 1.31 million mt in 2018-2019.

Mined output is expected to shrink by 4% in 2020-2021 to 1.37 million mt.

The growth forecast would be driven by production ramp-ups at several new mines and expansions of existing projects, including Glencore's Lady Loretta zinc mine, MMG's Dugald River, New Century Resources' zinc mine and Red River Resources' Thalanga.

The production increase is expected to drive up Australian zinc exports, with total mined and refined volumes likely to chalk up a 5.1% jump and peak at 1.51 million mt of metallic zinc content in 2019-2020 before tapering down to 1.46 million mt in the following fiscal, the department said.

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## Australia's Independence sees FY2019 Ni, Cu, Co output above guidance

Australian miner Independence Group expects its Nova operation to have exceeded fiscal 2018-2019 (July-June) production guidance ranges for nickel , copper and cobalt, while its Tropicana mine's production was within range, the company said Thursday.

Preliminary results show that nickel production during the 12-month period was 30,708 mt against its guidance of 27,000-30,000 mt, while copper was 13,693 mt compared with its guidance of 11,000-12,500 mt, the company said. Its cobalt output of 1,090 mt was better than its 850 mt-950 mt guidance range.

"Strong operating discipline and ongoing optimization at Nova has delivered nickel production rates, which have exceeded the average production rate determined in the Feasibility Study for each of the last five quarters. With capital development and grade control drilling substantially completed during FY2019, Nova is positioned to continue to deliver strong results into FY2020," it said.

RBC Capital Markets said that while it had been expecting Independence's production to be better than the guidance provided, the preliminary results were higher than its estimate of 30,200 mt, RBC's analyst Paul Hissey said.

"Whilst information in the announcement is limited — there is no disclosure of physical parameters such as throughput, grades and recoveries — the performance at Nova should be viewed favorably and confirm the asset has reached steady state," he said.

The Nova operation, located in Western Australia's Fraser Range — 380 kilometers from the Port of Esperance — began commercial production in July 2017. It is 100% owned by Independence Group.

Meanwhile, the company's 30% owned Western Australian Tropicana operation is expected to have produced 518,175 oz of gold on a 100% basis compared with guidance of 500,000-550,000 oz, with Independence's share at 154,402 oz, which was within the 150,000-165,000 oz guidance range, it said.

AngloGold Ashanti holds the remaining 70% of Tropicana and is the manager of the operation.

"Whilst slightly softer than our estimates, Tropicana continues to deliver consistent results for the JV," Hissey said.

RBC was expecting Tropicana to produce 523,000 oz of gold in FY2019, he said.

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## DR Congo armed forces deployed at Kamoto Copper Mine to deter artisanal mining: Glencore

Armed forces from the Democratic Republic of Congo (FARDC) have been deployed around the area of the Kamoto Copper Mine in an attempt to take control of the situation as tensions with artisanal miners at the site mount, the mine's majority owner, Glencore said Thursday.

Last month at least 43 illegal miners died in an accident at the KOV open-pit copper mine in the DRC, part of KCC operations.

The illegal miners were working on benches overlooking the extraction area when two galleries caved in, Glencore said in a statement. The Switzerland -based company added the fatalities were not linked to KCC operations or activities.

In a statement, Glencore said the FARDC had been called in, and that it was communicated that they must "exercise restraint and operate in accordance with Voluntary Principles on Security and Human Rights." Glencore controls 86% of Katanga Mining , which in turn owns a 75% stake in its subsidiary KCC. The operation continues to be a thorn in the side of the diversified commodities major.

"Preventative action will likely be needed and it could impact Glencore's social license to operate," BMO Capital Markets' Edward Sterck said of the move.

Glencore's statement Thursday said: "As stipulated in our Code of Conduct, Glencore upholds the dignity, fundamental freedoms and human rights of our employees, contractors and the communities in which we live and work, as well as others affected by our activities. We prioritize the safety and security of our workforce and host communities." Glencore said KCC would continue to engage with all the relevant stakeholders to collaborate on identifying and implementing a long-term, sustainable solution to illegal mining in the DRC.

The news will likely further rattle investor sentiment on the DRC, especially for the supply of cobalt to the growing electric -vehicle sector. KCC is one of Africa's largest copper producers and one of the world's main cobalt suppliers. Cobalt has been a hot topic as carmakers and others in the EV supply chain continually attempt to whittle down the amount of metal used.

The DRC has long been dogged by a corrupt image, a country that is rife with artisanal mining and child labor that can lead to questions of where the metal , and indeed how the material, has been mined .

A senior Japanese trader said there was a lack of trust and transparency about the supply chain out of the DRC. He said this needed to be addressed so the market could move forward.

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## UK sales of low emission cars fall for first time in 2 years: SMMT

Sales of alternatively-fuelled cars in the UK fell in June for the first time in more than two years, as the industry works towards an electric car future, the Society of Motor Manufacturers and Traders said Thursday.

The drop comes as total UK new car registrations fell for the fourth consecutive month with year-on-year demand falling by 4.9% to 223,421 units. This meant new car sales during the first half of the year were down 3.4% on the year to 1.27 million as ongoing confusion over low emission zones and diesel , the removal of key ultra-low emission vehicle incentives and a general decline in buyer confidence affected the market.

"Another month of decline is worrying but the fact that sales of alternatively fueled cars are going into reverse is a grave concern. Manufacturers have invested billions to bring these vehicles to market but their efforts are now being undermined by confusing policies and the premature removal of purchase incentives," SMMT CEO Mike Hawes said.

There was growth for gasoline and battery electric registrations in June, up 3.0% and 61.7% respectively, but this was not enough to offset the continuing decline of diesel , which fell (20.5%) for the 27th month in a row. Significantly, plug-in hybrids continued the recent downward trend, falling by a massive -50.4%, while hybrids also fell, by 4.7%.

The performance meant registrations of alternatively fueled vehicles as a whole fell for the first time since April 2017, undermining efforts to reduce emissions through fleet renewal of the latest ultra-low emission vehicles. This is despite ongoing investment, which has enabled manufacturers to offer UK car buyers more choice than ever before with more than 350 models now available in the UK — 44 of them plug-ins.

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## Nickel Mines starts rotary kiln at Indonesian NPI smelter

Australia's Nickel Mines' 17%-owned Ranger Nickel smelter joint venture has recently commissioned its new Number 2 rotary kiln electric furnace processing facilities in the Indonesia Morowali Industrial Park (IMIP) in Central Sulawesi .

The company said it was advised on June 29 by Shanghai Decent, Ranger Nickel's operator and 83% equity holder, that the joint venture had produced NPI from kiln No. 2 in a maiden production run, the company said in a statement Monday. The RKEF line is expected to take two months to ramp up to 80% capacity.

Ranger Nickel has two RKEF lines capable of producing NPI containing a minimum 14,000 mt/year nickel metal equivalent.

The kiln No. 2 commissioning came less than a month after Shanghai Decent kick-started production of Ranger Nickel's kiln No. 1.

It also means Nickel Mines and Shanghai Decent have together started up production of two new smelter joint ventures in IMIP within six months.

In February, the partners commenced NPI production at the Hengjaya Nickel smelter venture's newly built kiln No. 1. Hengjaya Nickel also has two RKEF lines with an installed NPI production capacity of 150,000 mt/year with 15,000 mt/year of contained nickel metal . Nickel Mines has a 60% controlling stake in the project. Shanghai Decent, a subsidiary of China's largest stainless steel -producer Tsingshan Group, holds the remaining 40%.

IMIP, owned 66.25% by Shanghai Decent, is being developed by the Tsingshan Group into an integrated NPI and stainless steel base with a respective designed annual production capacity of 1.95 million mt and 3 million mt. NPI produced at IMIP is used as a key raw material for stainless steel production on site.

Before the commissioning of Hengjaya and Ranger nickel smelters, Tsingshan already operated a total 20 RKEF lines with a combined 1.5 million mt/year of NPI production capacity at IMIP, the world's largest NPI producer in operation.

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## Battery Metals Weekly wrap-up

This week there was a change of tone in the European EV market, with focus shifting from charging to battery supply and also a bit of government-bashing from the industry.

According to data published by the UK's Society of Motor Manufacturers and Traders (SMMT) Thursday, June sales of battery-only electric cars were up 61.7% year on year but plug-in hybrid sales continued to plummet, dropping 50.4% on the year and taking total growth in sales of alternatively-fueled vehicles into negative territory for the first time since early 2017.

A jump of 61.7% sounds massive, right? Hold tight. Let's look at the actual numbers. There were 2,461 units sold in June 2019, up from 1,522 units a year ago. So, this is from a very low base. And the plug-in hybrid drop, well that went to 2,268 cars from 4,571 cars June 2018.

On a total market-share basis they both now command around, wait for it… a mighty 1% of overall car sales.

Meanwhile, sales of dirty old diesels may have been down 20.5% , but at 58,982 cars they still towered over new-fuel sales with a 26.4% market share.

SMMT chief executive Mike Hawes was critical of the UK government's approach, saying: "Manufacturers have invested billions to bring these vehicles [EVs] to market but their efforts are now being undermined by confusing policies and the premature removal of purchase incentives. If we are to see widespread uptake of these vehicles, which are an essential part of a smooth transition to zero emission transport, we need world-class, long-term incentives and substantial investment in infrastructure."

Jaguar Land Rover is also calling for the government to act, working alongside industry to bring a "giga-scale" battery plant to the UK. "These critical steps will also support and grow the existing supply chain, making the UK less dependent on essential materials sourced abroad today," it said in a statement.

Ralf Speth, CEO of Jaguar Land Rover, said: "Convenience and affordability are the two key enablers to drive the uptake of electric vehicles to the levels that we all need... Affordability will only be achieved if we make batteries here in the UK, close to vehicle production, to avoid the cost and safety risk of importing from abroad."

Talking to S&P Global Platts this week, lithium project developer European Metals' CEO Keith Coughlan said: "I think that the move to EVs is now irreversible. It just becomes a matter of the speed," adding that OEMs (original equipment manufacturers) need to have better investment in the battery supply chain.

Talk of a UK battery plant comes hot on the heels of Chinese battery maker CATL saying that it plans to increase its investment in its EV battery factory in eastern Germany to Eur1.8 billion ($2 billion).

Meanwhile, Mitsubishi UK came out in defence of plug-in hybrids. The OEM argued that the UK government's assertion that the PHEV market is well established and the focus should immediately shift to pure EVs is misplaced.

"The charging infrastructure is not fit for widespread EV adoption and is struggling to cope with the relatively tiny number of EVs currently on the road. PHEVs, however, reduce the demand on charging infrastructure in the short-to-medium term as drivers have the option of using an efficient petrol engine to supplement electric power on longer drives and ensures that any journeys within towns and cities can be made silently and cleanly in EV mode, improving air quality for everyone," it said in a statement Friday.

This echoes calls from independent emissions testing company Emissions Analytics last month, when it said the car industry should prioritize hybrids over fully EVs to bring about a more immediate and meaningful reduction in carbon dioxide emissions.

"Full BEVs appear to be a highly inefficient way to achieve an urgent and meaningful CO2 reduction. With supply chain issues and consumer acceptance challenges including range and price, there is cause to investigate alternative use of our limited battery capacity," said Emissions Analytics' CEO Nick Molden.

"Due to CO2's long life in the atmosphere, a small change now is far better than a large change in the future," he added.

There you have it; perhaps a drive to pure EV is slightly misguided? I mean, whenever I ask the market if they drive one, the answer is generally no!

European Metal's CEO said: "No I don't. I live in Australia – a country with vast areas and a small population. That hinders infrastructure roll out significantly. Sadly Australia will be a late adopter."

And over at Infinity Lithium, Vincent Ledoux Pedailles, an executive director, told me recently: "I don't own a car as I live in Central London and don't have kids. However, I use Uber, mostly hybrids and PHEV, and sharing platforms such as Zipcar where EV models are becoming prominent."

Jaguar were also slightly bearish on the likelihood of rapid adoption, fretting over infrastructure.

"Charging should be as easy as re-fueling a conventional vehicle," Jaguar's CEO said. Currently it's a long way from that.

Rob Lindley, MD, Mitsubishi Motors in the UK said: "Instead of growing, the market share of plug-in vehicles is now shrinking which makes it difficult to understand how this can be considered progress. We are calling on the government to work with the industry to put together a package of incentives to encourage the adoption of all progressive technologies and outline how this plan would move drivers to a pure EV future over the course of the next decade, for example.

He added: "Recent sales figures prove, however, that while customers want to do the right thing and buy a more environmentally friendly vehicle, they need incentives, both financial and social, along with assurances that their investment will retain its value down the line – both of which could be provided with a clear governmental timetable and framework."

We all love an incentive.

Let's end on a positive;  it is sunny outside after all:. The Jaguar news brought a smile to one man's Brexit-fatigued outlook.

Stuart Apperley, director and head of UK automotive at Lloyds Bank Commercial Banking, said: "For the sector as a whole this is an important announcement. While Britain remains one of the best places in the world to make cars, there have been concerns about falling behind others in leading the charge in the development of electric vehicles – principally the US, Japan and Germany. Everyone in the industry will hope JLR's move prompts others to follow suit in demonstrating their commitment to the UK."

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