BMW GROUP THE NEXT 100 YEARS

Corporate Communications

Media Information
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Raw material supplies for battery cells: BMW Group sources sustainable cobalt worth around 100 million euros from Morocco

- Supply contract signed with Managem Group (contract period: 2020 – 2025)
- BMW AG Board of Management member for Purchasing Andreas Wendt: "We are systematically driving electrification of our vehicle fleet. Sustainability plays a central role in expanding electromobility."

Munich. The BMW Group is driving the expansion of electromobility and sourcing the cobalt it needs as a key raw material for battery cells directly. Recently the BMW Group signed a supply contract with Moroccan mining company Managem Group. "The contract has a volume of around 100 million euros," said Andreas Wendt, member of the Board of Management of BMW AG responsible for Purchasing and Supplier Network. With this order the BMW Group will cover about a fifth of its cobalt needs for the fifth generation of our electric drive trains. The company will source the remaining four fifths of its cobalt needs from Australia. The contract between the BMW Group and the Managem Group is for a term of five years (2020 – 2025). The two companies already signed a memorandum of understanding on the direct purchase of cobalt from Morocco in Marrakesh in January 2019.

"Cobalt is an important raw material for electromobility. By signing this supply contract with Managem today, we are continuing to secure our raw material needs for battery cells," said Wendt. "We are systematically driving electrification of our vehicle fleet. By 2023, we aim to have 25 electrified models in our line-up – more than half of them fully-electric. Our need for raw materials will increase in line with this. For cobalt alone, we expect our needs to roughly triple by 2025."

Sustainability plays key role in expanding electromobility

Sustainability and security of supply are important factors for electromobility. "For us, ethically responsible raw material extraction and processing starts at the very beginning of the value chain: We take a keen interest in battery cell supply chains that extends all the way down into the mines themselves," said Ralf Hattler, Senior Vice President Purchasing Indirect Goods and Services, Raw Material, Production Partner at the BMW AG. Compliance with environmental standards and respect for human rights is the top priority. "Sustainability is an important aspect of our corporate strategy and plays a key role in expanding electromobility. We are fully aware of our responsibilities. Cobalt and other raw materials must be extracted and processed under ethically responsible conditions," emphasised Wendt. The highest sustainability standards apply to cobalt extraction at the Managem Group.

The BMW Group already publishes the countries of origin for the cobalt it uses on its website (see here). For the fifth generation of battery cells, the company has also restructured its supply chains and will source lithium, as well as cobalt, directly from 2020 and make these raw materials available to its two battery cell manufacturers, CATL and Samsung SDI. This ensures full transparency over where raw materials come from. The BMW Group will also cease to use rare earths in its fifth-generation electric drive trains from 2021 on. "This means we will no longer be dependent on their availability," said Wendt.

Extensive in-house expertise throughout entire battery cell value chain

The BMW Group possesses extensive in-house expertise throughout the entire value chain for battery cell technology. In November 2019, the company opened its Battery Cell Competence Centre in Munich, with the aim of advancing battery cell technology and introducing it into production processes. The production of battery cell prototypes makes it possible to analyse and fully understand cell value creation processes. "Whether we will produce cells ourselves in large

numbers at a later date will depend on how the supplier market develops," said Wendt.

The BMW Group will obtain battery cells for its fifth-generation electric drive trains from CATL (order volume: 7.3 billion euros, contract period: 2020 to 2031) and Samsung SDI (order volume: 2.9 billion euros, contract period: 2021 to 2031). "This will secure our long-term need for battery cells. Every cell generation is awarded to the manufacturer with the leading technology and most competitive economic aspects worldwide. This ensures we always have access to the best possible cell technology," added Wendt.

A decisive aspect for the BMW Group: As e-mobility gains more and more traction, the focus of CO_2 reduction shifts to upstream added value. As a leader in sustainability, the BMW Group has therefore reached a contractual agreement with its cell manufacturers that they will only use green power to produce fifth-generation battery cells for the BMW Group. This ensures that the company will save around ten million tonnes of CO_2 over the next decade. Especially, the energy-intensive production of high-voltage batteries is a major and very effective lever for reducing CO_2, because up to 40 percent of a fully-electric vehicle's emissions come from battery cell production alone. So that is precisely where the BMW Group is focusing its efforts.

The BMW Group produces batteries in-house at its plants in Dingolfing (Germany), Spartanburg (USA) and at the BBA plant in Shenyang (China). The BMW Group has also localised battery production in Thailand, where it works with the Dräxlmaier Group.

To access the cell technology that is vital for electromobility, the BMW Group has formed a technology consortium with Swedish battery manufacturer Northvolt and Umicore, a Belgian developer of battery materials. The collaboration will focus on creating an end-to-end sustainable value chain for

battery cells in Europe, extending from development to production to recycling. In the face of rapidly growing demand for battery cells, recycling of battery components and extensive reuse of raw materials will be the best way to close the materials loop as far as possible.

BMW Group as e-mobility pioneer – 25 electrified models by 2023

The company will have 25 electrified models in its line-up by 2023. Flexible vehicle architectures for fully-electric vehicles, plug-in hybrids and models with combustion engines allow the company to respond quickly to changing conditions and form the basis for this. More than half of the 25 models will be fully electric. The BMW Group will double its sales of electrified vehicles between 2019 and 2021 and anticipates a steep growth curve up to 2025: Global sales of our electrified vehicles should increase by an average of over 30 percent each year. In Europe, the company is also following an ambitious growth logic: By 2021, electrified vehicles should make up a quarter of our new vehicle fleet, reaching a third in 2025 and half of our sales in 2030.

As an e-mobility pioneer, the BMW Group is already a leading provider of electrified vehicles. By the end of 2019, the company had more than half a million fully-electric and plug-in hybrid vehicles on the roads. By the end of 2021, the BMW Group will offer five fully-electric series-production vehicles. In addition to the BMW i3*, with more than 160,000 units built to date, production of the fully-electric MINI* also got underway at Plant Oxford in 2019. This will be followed later this year by the fully-electric BMW iX3, produced in Shenyang, China and, in 2021, by the BMW iNEXT, manufactured in Dingolfing and the BMW i4 from Plant Munich.

***Consumption and emission data:**
BMW i3 (120 Ah)**:** fuel consumption combined: 0.0 l/100 km; power consumption combined 13.1 kWh/100 km; CO2 emissions combined 0 g/km
BMW i3s (120 Ah)**:** fuel consumption combined: 0.0 l/100 km; power consumption combined 14.6-14.0 kWh/100 km; CO2 emissions combined 0 g/km
MINI Cooper SE: fuel consumption combined: 0.0 l/100 km, power consumption combined 16.8-14.8 kWh/100 km, CO2 emissions combined: 0 g/km

The BMW Group

With its four brands BMW, MINI, Rolls-Royce and BMW Motorrad, the BMW Group is the world's leading premium manufacturer of automobiles and motorcycles and also provides premium financial and mobility services. The BMW Group production network comprises 31 production and assembly facilities in 15 countries; the company has a global sales network in more than 140 countries.

In 2019, the BMW Group sold over 2.5 million passenger vehicles and more than 175,000 motorcycles worldwide. The profit before tax in the financial year 2019 was € 7.118 billion on revenues amounting to € 104.210 billion. As of 31 December 2019, the BMW Group had a workforce of 126,016 employees.

The success of the BMW Group has always been based on long-term thinking and responsible action. The company has therefore established ecological and social sustainability throughout the value chain, comprehensive product responsibility and a clear commitment to conserving resources as an integral part of its strategy.

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