

Sustainability and e-mobility BMW Group Purchasing steps up sustainability activities and paves the way for future e-mobility growth

- High level of supply chain flexibility speeds up transformation towards e-mobility
- Extensive measures to ensure compliance with environmental and social standards and secure access to many critical raw materials
- Sustainability measures in supply chain delivering results: CO2 emissions reduced by 17% in BMW iX
- Wendt: “Sustainability is an integral part of all purchasing activities”

Munich. The BMW Group is increasingly gearing up its purchasing for future growth in e-mobility and setting new standards for sustainability. The expansion of e-mobility makes value creation in the supplier network more important than ever, both with respect to CO2 emissions and sourcing of so-called critical raw materials, like those needed for producing battery cells.

“We believe sustainability is an integral part of all purchasing activities. So, as we accommodate the planned growth in electrified vehicles in the supplier network, we are at the same time integrating our sustainability requirements into all contract awards. In this way, we are taking sustainable development to the next level. Particularly as a premium manufacturer, we aspire to lead the way in sustainability and take responsibility,” said Dr Andreas Wendt, member of the Board of Management of BMW AG responsible for Purchasing and Supplier Network.

The BMW Group aims to have more than seven million electrified vehicles on the roads by 2030 – two thirds of them fully-electric. At this scale, BMW Group Purchasing is ensuring not only that the supply chain can handle higher volumes, but also implement requirements for sustainable development. In this way, BMW Group Purchasing is making a vital contribution to the company’s transformation towards e-mobility.

High flexibility accommodates growing demand for e-mobility

Growing demand for electrified vehicles will also increase the need for the components and parts that go into producing these vehicles. With regard to battery cells, in particular, BMW Group Purchasing is implementing various measures to accommodate this growth. The BMW Group sources the current fifth-generation battery cells from four suppliers – making it less dependent on individual suppliers.

“Volume flexibility is a basic premise and decisive criterion in the selection of our battery cell suppliers. For our fifth-generation battery cells, we have agreed 20% flexibility in the quantities to be purchased: in both directions – up and down,” added Wendt.

Since the battery cell accounts for much of the cost of the drive train in electrified vehicles, this is a key lever for long-term cost reduction. The main focus is on cell raw materials and battery cell production. The BMW Group is therefore consolidating its extensive know-how in these areas at its own Battery Cell Competence Centre.

Focus on sustainability makes an impact on the BMW iX

The BMW Group is steadily expanding its sustainability activities in parallel with the strong growth in e-mobility. Purchasing focuses on three main areas: 1. compliance with environmental and social standards and respect for human rights; 2. protecting natural resources; and 3. reducing CO2 emissions in the supply chain.

These measures are already delivering results in the BMW iX (combined power consumption: < 21 kWh/100km in the WLTP test cycle*; CO2 emissions combined: 0 g/km): Relying on renewable green power to produce battery cells and increased use of secondary material reduces CO2 emissions in the BMW iX supply chain by 17%, compared to the same vehicle produced without these measures.

At the same time, the BMW Group is also limiting its use of critical raw materials and has reduced the amount of cobalt in the cathode material for the current fifth-generation battery cells to less than 10% and increased the amount of secondary nickel to up to 50%. The e-drive no longer requires the use of rare earths.

Compliance with environmental and social standards controlled through transparent processes before, during and after the contract is awarded

The BMW Group is a trailblazer for corporate due diligence in the supplier network. As early as 2008, the company began addressing this issue and subsequently insisted on comprehensive environmental and social standards when commissioning deliverables for the BMW i3. Since 2014, all BMW Group direct suppliers have been contractually obliged to respect human rights, comply with expanded environmental and social standards and to introduce management systems to promote occupational safety and protect the environment. These requirements must also be contractually passed on to subcontractors.

“We don’t just hand off responsibility to the supplier network; we take responsibility jointly with our direct suppliers. We benefit from our years of experience and are creating processes to achieve better transparency and traceability,” explained Wendt.

BMW Group Purchasing does not rely on contractual obligations alone for this, but is also implementing a large number of additional measures as part of a transparent process. A risk filter is used to evaluate potential supplier locations worldwide even before the call for bids. The next step is to require possible suppliers to outline their sustainability activities in a detailed questionnaire. External partners also work with internal appraisers to review selected locations.

Compliance with the defined sustainability requirements is a prerequisite for awarding a contract. Throughout the contract period, external partners work with internal appraisers to verify compliance with sustainability requirements through

questionnaires and audits.

If discrepancies arise during any of these steps, the BMW Group agrees on corresponding measures with the suppliers. In this way, BMW Group Purchasing is monitoring thousands of locations every year.

The company has also established a procedure that can be used to report non-compliance with social and environmental standards anonymously.

Special focus on critical raw materials

Eliminating infringements of human rights and environmental standards presents a particular challenge in the case of critical raw materials – for example, for lithium and cobalt, both of which are key components for production of battery cells. For both raw materials, BMW Group Purchasing has therefore implemented additional measures to ensure cobalt extraction and processing takes place in compliance with sustainability standards and to avoid problems with working conditions, e.g. child labour. The company is therefore sourcing cobalt and lithium directly from the mines and making it available to battery cell suppliers.

“As well as guaranteeing predictable pricing, this enables us to anchor our sustainability standards in contracts and ensure cobalt and lithium are mined and processed in an environmentally and socially sustainable manner. We saw this for ourselves when we inspected mines in Australia and Morocco,” explained Wendt.

Another major challenge is ensuring respect for human rights and compliance with environmental, health and safety standards for extraction of raw materials when the process is not industrialised, but takes place under the most basic artisanal conditions. For this reason, as part of its corporate due diligence, the BMW Group is actively taking responsibility and participating in local projects, based on the principle of “empowerment before withdrawal”. In 2018, the BMW Group joined forces with other partners to create the cross-sector “Cobalt for Development” initiative in Congo. The aim of the project, which is implemented by the German

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Agency for International Cooperation (GIZ) is to develop and professionalise artisanal mining in the region, so that it meets the BMW Group's high sustainability requirements and could again become an option for sourcing cobalt in the long term.

Additional sustainability measures for other critical raw materials

The BMW Group has implemented additional measures to tighten compliance with environmental and social standards for the additional critical raw materials. Here, BMW Group Purchasing goes beyond contractually agreed sustainability standards and is getting more involved in the supply chain through corresponding agreements made directly at particularly critical points in the supply chain.

Mines and smelters are a focal point: Here, direct contact can be increased through collaborations. It is also important that mines and smelters are certified according to strict, internationally recognised standards. To this end, BMW Group Purchasing is actively involved in international standardisation initiatives focused on raw material extraction, such as the IRMA standard, which is the most accepted, most ambitious and most comprehensive of all mining standards.

However, expansion of other local projects like "Cobalt for Development" is also conceivable, as well as extending direct purchasing of critical raw materials.

Responsible management of natural resources

In addition to compliance with environmental and social standards and respect for human rights, responsible management of nature's finite resources also plays a central role.

To safeguard reserves of critical raw materials, the BMW Group has set itself the goal of significantly increasing the percentage of recycled raw materials it uses, so-called secondary material, by 2030 and using raw materials multiple times in a circular economy. The growth in e-mobility makes the idea of the circular economy increasingly important, because of the many critical raw materials needed for

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battery cells. Secondary material reduces CO2 emissions substantially compared to primary materials: by about factor four to six for aluminium.

Reduction of CO2 emissions in supply chain delivering results

The BMW Group aims to reduce supply chain CO2 emissions per vehicle by 20% from 2019 levels by 2030. Without corrective measures, CO2 emissions per vehicle in the BMW Group supply chain would increase by more than a third by 2030 – mainly due to highly energy-intensive production of battery cells and increased use of aluminium. The company intends to reverse this trend. One of the ways it is doing so is by making carbon footprint a decision criterion in its contract award processes. In particular, the use of green electricity for the production of the battery cells in the BMW iX has led to a significant reduction in CO2 emissions in the supply chain.

CO2 EMISSIONS & CONSUMPTION:

BMW iX

Combined power consumption: < 21 kWh/100km in the WLTP test cycle*;

CO2 emissions combined: 0 g/km.

* Data on driving performance, energy consumption and range are preliminary and based on forecasts

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Email: presse@bmwgroup.com**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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