

Media Information  
2 February 2021

## **Harnessing the power of the desert sun: BMW Group sources aluminium produced using solar energy**

- Aluminium produced using solar energy will meet almost half the annual requirements of the light metal foundry at Plant Landshut
- Triple-digit million-euro contract with Emirates Global Aluminium to supply 43,000 tonnes of aluminium in 2021
- BMW Group also plans to source aluminium produced with green power long-term, with CO<sub>2</sub> savings of around 2.5 million tonnes by 2030
- Wendt: “Will reduce CO<sub>2</sub> emissions in the supplier network by 20% by 2030”

**Munich.** The BMW Group will begin sourcing aluminium produced using solar electricity with immediate effect. This marks an important milestone on the road to the company’s goal of lowering CO<sub>2</sub> emissions in its supplier network by 20% by 2030. Since producing aluminium is highly energy-intensive, the use of green power – such as solar electricity – offers considerable potential for reducing CO<sub>2</sub> emissions. That is why the BMW Group also plans to source aluminium produced with green power in the long term – enabling it to avoid approx. 2.5 million tonnes of CO<sub>2</sub> emissions over the next ten years. This is equivalent to about three percent of the CO<sub>2</sub> targets the company has set for its supplier network.

“We aspire to lead the way in sustainability and implement our sustainability goals in a systematic manner. We will be able to meet over 50% of our CO<sub>2</sub> targets for the supplier network, just by using green power. The use of solar electricity for producing aluminium is a major step in this direction,” said Dr. Andreas Wendt, member of the Board of Management of BMW AG responsible for Purchasing and Supplier Network.

The aluminium produced using solar power is processed in the light metal foundry at BMW Group Plant Landshut to manufacture body and drive train components, including those needed for electric drive trains, for instance. Sourcing 43,000 tonnes of solar aluminium valued in the three-digit million euros will supply nearly half the annual requirements of the light metal foundry at Plant Landshut.

**Use of green power key to reduce CO<sub>2</sub> emissions**

The trend towards e-mobility means that a much larger percentage of a vehicle's lifecycle CO<sub>2</sub> emissions now comes from upstream added value in the supplier network. In an electrified vehicle, CO<sub>2</sub> emissions from the use phase are much lower, but producing battery cells or aluminium is very energy-intensive. Without corrective measures, CO<sub>2</sub> emissions per vehicle in the BMW Group supply chain would increase by more than a third by 2030. The company not only wants to stop this trend, but also reverse it – and even lower CO<sub>2</sub> emissions per vehicle by 20% from 2019 levels.

The BMW Group has therefore already agreed with suppliers for its current fifth-generation battery cells that they will only use green power for producing battery cells.

The BMW Group is now taking the next logical step by sourcing aluminium produced with green power. Because, as e-mobility takes off, aluminium will become increasingly important as a lightweight material that can partially offset the heavy weight of the batteries in electrified vehicles. However, producing aluminium is extremely energy-intensive. Generating the electricity needed to produce primary aluminium, i.e. aluminium obtained directly from the mineral compound alumina, is alone responsible for about 60% of the global aluminium industry's greenhouse gas emissions. The use of solar electricity is therefore an effective lever for reducing the CO<sub>2</sub> emissions associated with aluminium smelting.

**Solar park in the desert supplies green power for aluminium production**

The BMW Group already has a long-standing supply relationship for primary aluminium with Emirates Global Aluminium (EGA). EGA has now become the first company in the world to also use solar electricity for commercial production of aluminium, which it will initially supply exclusively to the BMW Group. EGA sources the electricity used to produce the aluminium destined for the BMW Group from the Mohammed Bin Rashid Al Maktoum Solar Park in the desert outside of Dubai, which, in the final stage of development, is set to become the world's largest solar park. It is operated by the Dubai Electricity and Water Authority, which

has the electricity it produces sustainably certified by third parties, ensuring that it can supply EGA with power that is traceable and transparent.

Abdulnasser Bin Kalban, Chief Executive Officer of EGA, said: “We are delighted to have the BMW Group as our first customer for low-carbon CelestiAL aluminium from EGA. Aluminium is light, strong and infinitely recyclable. That is why it plays such an important role in the development of a more sustainable society and in making modern life possible. But how sustainably the aluminium is produced is also important. Solar aluminium is a step in the right direction – it uses a natural and abundant source of energy in our desert environment to produce a metal that is vital to the future of our planet.”

Wendt adds: “In EGA, we have found a strong partner who values sustainable development just as much as we do. It is a special honour for us to be the first customer to receive aluminium produced using solar electricity. Aluminium plays an important role in e-mobility and using sustainably produced aluminium is tremendously important to our company.”

### **Innovative production processes:**

#### **light metal foundry at BMW Group Plant Landshut**

The light metal foundry is the largest production unit at BMW Group Plant Landshut and the company's only European manufacturing facility for light metal casting. Last year, the more than 1,600 employees at the light metal foundry at BMW Group Plant Landshut produced a total of 2.9 million cast components. The scope of production includes engine components such as cylinder heads and crankcases, components for electric drive trains and large-scale structural components for vehicle bodies.

The light metal foundry is one of the most state-of-the-art foundries in the world. Its innovative and sustainable production processes have won numerous awards. The light metal foundry also works with shaping sand cores, among other methods, to manufacture cast parts. The sand cores are produced using inorganic binders – making the casting process virtually emission-free. Five different casting methods are used for standard production of cast components. The most suitable

casting method is selected, depending on the component concept, technological requirements and production volume.

### **Certification by Aluminium Stewardship Initiative (ASI)**

The light metal foundry at BMW Group Plant Landshut was already certified for its sustainable use of aluminium back in December 2019. It meets the standards of the Aluminium Stewardship Initiative (ASI), an international non-profit organisation supported by environmental and industrial associations, NGOs, aluminium producers and processing companies. ASI aims to maximise aluminium's contribution to a sustainable society and defines sustainability criteria for an environmentally and socially responsible aluminium value chain. Through this initiative, following an audit by an independent third party, the BMW Group received confirmation that its light metal foundry handles aluminium in a conscious and responsible manner.

### **Responsible use of natural resources**

In addition to using green power to produce aluminium, the BMW Group is also taking additional steps to safeguard reserves of critical raw materials. For instance, the BMW Group has set itself the goal of significantly increasing the percentage of recycled raw materials, so-called secondary material, by 2030 and using raw materials multiple times in a circular economy. The use of secondary material reduces CO<sub>2</sub> emissions substantially compared to primary materials and also conserves natural resources.

At the same time, the BMW Group is establishing carbon footprint as a new contract award criterion for its supply chain and already began implementing this for the tenders with the biggest carbon footprint in 2020.

These measures are already delivering results in the BMW iX (power consumption combined: < 21 kWh/100 km in the WLTP\* test cycle; CO<sub>2</sub> emissions combined: 0 g/km): Relying on renewable green power to produce battery cells, in combination with increased use of secondary material, reduces CO<sub>2</sub> emissions in the BMW iX supply chain by 17%, compared to the same vehicle produced without these measures.

The BMW Group aims to have more than seven million electrified vehicles on the roads by 2030 – two thirds of them fully-electric. For this order of magnitude, BMW Group Purchasing is working with suppliers to ensure not only that the supply chain can manage the growth in volumes, but also that it can implement the requirements for sustainable development. In this way, BMW Group Purchasing is making a vital contribution to the company's transformation towards e-mobility.

### **About Emirates Global Aluminium (EGA)**

EGA is the world's largest producer of "premium aluminium" and was the first company headquartered in the Middle East to join the Aluminium Stewardship Initiative. EGA has supplied the BMW Group with primary aluminium since 2013.

EGA is an integrated aluminium producer, with operations ranging from bauxite mining to refineries and electrolysis, all the way to production of cast primary aluminium.

In 2019, EGA sold 2.6 million tonnes of cast metal. EGA is the only aluminium producer in the United Arab Emirates – making it the fifth-largest aluminium-producing country in the world.

With more than 400 customers in over 50 countries, EGA is one of the largest suppliers of foundry alloys to the automotive industry worldwide. EGA is certified to IATF 16949:2016, the latest global standard established by the automotive industry, which aims to ensure even more rigorous quality management in the global automotive supply chain.

#### CO<sub>2</sub> EMISSIONS AND CONSUMPTION

BMW iX: Power consumption combined: < 21 kWh/100 km in the WLTP\* test cycle; CO<sub>2</sub> emissions combined: 0 g/km.

\*Data on driving performance, energy consumption and range is provisional and based on forecasts.

Corporate Communications

Media Information

Date 2 February 201

Subject BMW Group sources aluminium produced using solar energy

Page 6

If you have any questions, please contact:

**Corporate Communications**Sandra Schillmöller, Corporate Communications, Communications Purchasing and Supplier Network  
Email: [Sandra.Schillmoeller@bmwgroup.com](mailto:Sandra.Schillmoeller@bmwgroup.com) , Telephone: +49-89-382-12225Saskia Eßbauer, BMW Group Corporate and Governmental Affairs, Communications Landshut  
Email: [Saskia.Essbauer@bmw.de](mailto:Saskia.Essbauer@bmw.de), Telephone: +49-871-702-3232,Eckhard Wannieck, head of Corporate and Culture Communications  
Email: [Eckhard.Wannieck@bmw.de](mailto:Eckhard.Wannieck@bmw.de), Telephone: +49 89 382-24544Media website: [www.press.bmwgroup.com](http://www.press.bmwgroup.com)  
Email: [presse@bmwgroup.com](mailto:presse@bmwgroup.com)**Contacts at Emirates Global Aluminium**Simon Buerk, Senior Vice President Corporate Affairs  
Email: [sbuerk@ega.ae](mailto:sbuerk@ega.ae), Telephone: +971 56 311 1536**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 2020, the BMW Group sold over 2.3 million passenger vehicles and more than 169,000 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.

[www.bmwgroup.com](http://www.bmwgroup.com)Facebook: <http://www.facebook.com/BMWGroup>Twitter: <http://twitter.com/BMWGroup>YouTube: <http://www.youtube.com/BMWGroupView>Instagram: <https://www.instagram.com/bmwgroup>LinkedIn: <https://www.linkedin.com/company/bmw-group/>