

Media Information  
29 June 2018

## **Sustainable, stable power supply for tomorrow's electric mobility.**

### **Energy control stations at BMW Group Plants Dingolfing and Landshut help stabilise growing green grid.**

**Dingolfing / Landshut.** The energy control stations at BMW Group Plants Dingolfing and Landshut are stepping up their activities in the balancing-power market: Together with other highly-flexible controllable systems in the BMW Group production network, they will contribute to the stability of the public grid outside of the plant. By participating in the balancing-power market, the BMW Group is implementing an innovative business model, enabling integration of renewable energies into the electricity mix and fulfilling important requirements for the electric mobility of tomorrow. Once again, the BMW Group is demonstrating its holistic view of premium electro-mobility and its belief in a sustainability that extends far beyond electrified vehicles.

#### **Balancing energy as a safety net**

Balancing energy serves as a versatile energy reserve that can be used to even out fluctuations in the grid. This is necessary because power generation from renewable energies depends on availability of sun and wind and can therefore only be controlled to a limited extent. For this reason, network operators utilise so-called balancing power to ensure that the power grid remains stable, despite increasing integration of renewable energies. This applies when there is a surplus of electricity – for example, of wind power during stormy weather – but also when there is a surge in demand among electricity consumers in the network. If the target grid frequency drops below 50Hz, transmission system operators provide balancing energy to offset this – on an ongoing basis, virtually in real time.

#### **Stable grids for future electric mobility**

As mobility becomes increasingly electric, the energy and mobility sectors will grow closer together. This is clear, for example, from the BMW Group's marketing of balancing power. "With this business model, we can help stabilise the grid and expand the use of sustainably-generated electricity," says Dr. Joachim Kolling, head of BMW Energy Services. "Through intelligent connectivity and management of electricity

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producers, consumers and storage options, we are helping shape the energy grid of the future. The flexibility we provide paves the way for the CO<sub>2</sub>-free electric mobility of tomorrow," adds Kolling.

### **Building a virtual power plant**

The facilities in Dingolfing and Landshut are part of the BMW Group's network of different energy systems at various sites. With intelligent management, these highly-flexible systems can absorb energy as needed or release it into the grid. "You have to imagine it as a virtual Group power plant providing us with additional flexibility. We refer to it as the BMW power pool," says Dr. Joachim Kolling. In addition to flexible energy generators, such as the combined heat and power (CHP) plant in Dingolfing, energy consumers can also be integrated into the BMW power pool. The same now applies to the ventilation systems at BMW Group Plant Landshut, for example. Using the only process of its kind in the industry, ventilation can be flexibly adjusted without any adverse effects. The BMW Battery Storage Farm at the Leipzig plant, which has been on-stream since October 2017, with up to 700 BMW i3 batteries, is also part of the BMW power pool.

### **Future flexibility also through electric vehicles**

As advancing electromobility brings new technical innovations, electrified vehicles will no longer just be consumers of electricity, but will also be able to feed power back into the grid, as needed. Dr. Joachim Kolling explains: "Think of our electrified vehicles as mobile power storage units. Not only will the stationary installations at our plants soon be networked to keep the grid stable, but so will our vehicles – with the consent of our customers, of course." With this holistic approach to electromobility, the BMW Group is making a major contribution to the emission-free mobility of the future.

### **Captions**

Photo 01: The CHP control station at BMW Group Plant Dingolfing will be part of the BMW power pool, helping offset fluctuations in the grid.

Photo 02: Gas engine inside the CHP control station at BMW Group Plant Dingolfing.



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**BMW Energy Services**

BMW Energy Services views itself as an enabler for the BMW Group's electromobility strategy. It develops customer-centric business models based on intelligent connectivity between energy consumers, producers and storage systems resting upon the BMW Energy Cloud. These business models enable customers to reduce their energy costs – for example, through peak load optimisation, or improve their CO2 footprint – for example, through better utilisation of electricity from renewable energies or electromobility.

**BMW Group Plant Dingolfing.**

Plant Dingolfing is one of the BMW Group's 30 global production sites. At Plant 02.40, about 1,600 cars of the BMW 3, 4, 5, 6, 7 and 8 Series roll off the assembly lines every day. In total, the plant manufactured more than 376,000 cars in 2017. At present, a total of approx. 18,000 people and 800 apprentices work at the BMW Group's site in Dingolfing.

In addition to the automotive core production, BMW Group Plant Dingolfing is also home to production facilities for vehicle components such as pressed parts, seats as well as chassis and drive components. Due to the plant's aluminum expertise in vehicle construction and longstanding experience in producing alternative drives, BMW Group Plant Dingolfing furthermore provides crucial components for the BMW i models – such as high-voltage battery, e-transmission and the drive structure – to the production site in Leipzig. In addition, Dingolfing produces both high voltage batteries and electric engines for the BMW Group's plug-in hybrid models.

The car bodies for all Rolls-Royce models are also manufactured at the site. The Dynamics Center, a large storage and transshipment facility, provides the global BMW and MINI dealership organization with original parts and equipment.

**The BMW Group Plant Landshut**

The Landshut plant is one of 31 BMW Group production locations worldwide. 4,300 employees produce innovative components for all BMW Group vehicles, such as engine and drivetrain components made from light metal casting, plastic exterior parts, Carbon Fiber Reinforced Plastic (CFRP) body components, cockpit and equipment parts, electric drivetrains, special engines and



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driveshafts. These components are being delivered to all automobile and engine plants of the BMW Group production network. In every BMW, MINI and Rolls-Royce there is a piece of innovative strength made in Landshut.

As a competence center for future technologies like lightweight construction and electromobility, the BMW Group Plant Landshut plays an important role during the development of new models. In addition, the plant is a supplier for key components of the BMW i models and the BMW 7 Series. The BMW Group Plant Landshut is also home to the BMW Group Lightweight Design and Engineering Center. At this automotive think tank, specialists from different divisions are working together to develop innovative, mixed-material concepts and production procedures for future vehicle generations.