

Press Information

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**The 'Heart' Beats: Energy Center Completed**

+++ BMW Group Plant Irlbach-Straßkirchen: Energy Centre and Fire Station completed after only 14 months of construction +++ Supplies production and buildings with heat, cooling, compressed air and electricity +++ No use of fossil fuels +++ Fire brigade on site 24/7 for safety +++

**Irlbach-Straßkirchen.** Construction of BMW Group's new high-voltage battery assembly plant in the municipalities of Irlbach and Straßkirchen (Straubing-Bogen district) is progressing at high speed.

"With the completion of the Energy Centre building and the fire station, we have reached the next important milestone on the road to serial production for the new generation 6 high-voltage batteries here in Lower Bavaria," says Sabrina Kugler, Project Manager for Plant Construction Irlbach-Straßkirchen. "The Energy Centre supplies the new plant with all the essential utilities. In addition, there are around 3,000 square metres with optimal conditions for the fire department."

**For safety: Fire service on duty 24/7**

In June, the BMW fire brigade began its around-the-clock duty on the BMW Group Irlbach-Straßkirchen site. With five service vehicles and 26 people working in shifts, the fire service will ensure the safety of employees at the site. The accreditation process as a plant fire brigade is currently underway.

The team comprises experienced colleagues from other BMW Group sites in Bavaria as well as newly trained plant firefighters recruited from the region. Two of the new employees are also active in the volunteer fire departments in Irlbach and Straßkirchen. Training events and exercises continue to be closely coordinated with the nearby municipal fire brigades.



## **Central control unit for all essential resources**

For Silvia Meyer, Head of Real Estate Management at the Irlbach-Straßkirchen plant, the Energy Centre is the "heart" of the new high-voltage battery assembly plant. "Here future production and the ancillary buildings are supplied with all necessary media – electricity, cooling, heat, cooling water and compressed air." The utility media are controlled in the so-called Operations Centre. The building's heating, ventilation, air conditioning and lighting are controlled automatically and resource-efficiently via the energy control technology installed there. With the help of sensors, all key production facilities and rooms are continuously monitored and visualised in real time on the control room screens.

## **Waste heat from production used for heating**

Waste heat from the production processes is used to heat the canteen, storage and ancillary buildings at low temperatures. To do this, heat pumps in the Energy Centre convert the roughly 23°C chilled water heated by the production plants into heating energy at about 60°C. Four heat pumps, each with 1.8 MW, guarantee fault-tolerant heating capacity.

The entire piping system of the Energy Centre extends over 3.8 kilometres and is initially filled with 500,000 litres of water. The production and assembly process for high-voltage batteries requires no water. Drinking water at the site is used only for kitchens and washbasins. Rainwater collected on the roofs is used for toilets.

## **Highly automated production process requires compressed air**

The highly automated material-handling technology in the production process for high-voltage batteries continuously requires compressed air.



The energy center supplies compressed air at 6 bar to the systems in the production. Two redundant compressors cover base load, and a variable compressor covers peak load. The waste heat from the compressors is also fed into the cooling-water circuit and again available for heating the factory via the heat pumps.

### **Plant runs exclusively on renewable electricity**

Although a natural gas pipeline runs across the site, the energy supply for the BMW Group Plant Irlbach-Straßkirchen in regular operation relies entirely on non-fossil energy sources. The plant is not connected to the natural gas pipeline.

At the new site, electricity is generated from solar energy to cover part of the total power demand. A photovoltaic installation will be installed on a roof area of around 62,000 square metres. The extent is more than a third of the roof area of the future production building, i.e. about the size of nine football pitches. The PV system will be installed and operated by the energy supplier VERBUND. Construction will begin in spring 2026, allowing it to be commissioned in time for the start of serial production. Nearly 14,000 photovoltaic modules can deliver over 6 MW peak (MWp) and thus generate more than 6,000 MWh per year. Any additional external electricity required will come entirely from renewable sources.

The electrical supply of the assembly plant will be provided via underground 110 kV cables connected to a substation operated by Bayernwerk Netz GmbH in Irlbach, which is currently under construction. Until the substation is completed in 2028, a provisional 34 MW connection to the existing 110 kV high-voltage lines will ensure a stable power supply for the current construction site and the future production operation.

In addition, two own transformers with a maximum reference capacity of 68 MW have been installed on the site near the Energy Centre. They initially convert the 110 kV supply to 20 kV for distribution on the site. Transformers located close to consumption provide the 230 V and 400 V supplies.

### **Radio mast secures mobile phone coverage**

The Energy Centre also plays a key role in the plant's mobile phone coverage: a radio mast on the roof of the Energy Centre provides mobile coverage for the outdoor areas of the site. Inside the plant, around 220 antennas have already been installed in various buildings, and more than 9.5 kilometres of RF cable and 3.5 kilometres of fibre optic cable have been laid to ensure coverage across the entire site.

### **Digital planning tool BIM accelerates construction progress**

The approximately 10,400 square metre building for the Energy Centre and Fire Station was completed in just under 14 months.

A key contributor to this short construction period was Building Information Modelling (BIM), a digital planning method. BMW Group applies the BIM approach consistently in all planning and realisation processes for the new Plant Irlbach-Straßkirchen. The system networks data and workflows of all project participants from planning through construction to operation.

The use of BIM ensures that all project participants have access to the current planning status. The method helps identify and optimise interfaces between all project participants at an early stage. An autonomous drone is used to continuously compare the current construction progress (as-built) with the digital building model (as-planned). Deviations are identified

quickly so that corresponding measures can be taken. BIM is thus a fundamental component for a smooth commissioning, acceptance and handover (IAÜ process) of the buildings and systems.

Further information on the BMW Group plant Irlbach-Straßkirchen can be found on the project website – [www.bmwgroup-werke.com/irlbach-strasskirchen](http://www.bmwgroup-werke.com/irlbach-strasskirchen).

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**The BMW Group**

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 services. The BMW Group production network comprises over 30 production sites worldwide; the company has a global sales net-work in more than 140 countries.

In 2024, the BMW Group sold over 2.45 million passenger vehicles and more than 210,000 motorcycles worldwide. The profit before tax in the financial year 2024 was € 11.0 billion on revenues amounting to € 142.4 billion. As of 31 December 2024, the BMW Group had a workforce of 159,104 employees.

The economic success of the BMW Group has always been based on long-term thinking and responsible action. Sustainability is a key element of the BMW Group's corporate strategy and covers all products from the supply chain and production to the end of their useful life.



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