Press Release

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Future of Energy: Bavarian State Government Visits Bilfinger as Key Player in Nuclear Fusion

Würzburg, Germany – The Free State of Bavaria is a pioneer in the energy supply of tomorrow. Today, the State Minister for Science and Art, Markus Blume, MdL, together with his parliamentary colleagues Björn Jungbauer, MdL, and Dr. Andrea Behr, MdL, visited Bilfinger Nuclear & Energy Transition in Würzburg.

Industrial services provider Bilfinger is entering the future market of fusion reactors with full force. With the rebranding of Bilfinger Engineering & Technologies GmbH and Bilfinger Noell GmbH to Bilfinger Nuclear & Energy Transition GmbH on March 4, 2024, and as a founding member of the German industry association Pro-Fusion launched in early June, the company underscores its leading role in this field.

Revolutionary Technologies in Focus

During the visit, the focus was on the technological possibilities of nuclear fusion, a central theme in the Bavarian Master Plan for the Promotion of Nuclear Fusion and Novel Nuclear Technologies, which was presented in September 2023. The master plan pursues the ambitious goal of making Bavaria a global center of fusion research and establishing the “Bavarian Fusion Cluster”.

The significance of this initiative is particularly evident against the backdrop of the shutdown of Germany’s last nuclear power plant, Isar II, in April 2023. Since then, Germany has become more dependent on electricity imports, leading to increases in energy prices and a rise in emissions. The Bavarian State Government rejects the nationwide phase-out of nuclear energy use in the current situation.

Science Minister Markus Blume emphasized on-site: “Nuclear fusion has the potential to change the world. We are convinced of the opportunity for clean, safe, CO_2-neutral, and at the same time, base-load capable energy. Bavaria is leading in the field of fusion research in Europe, and we have a unique fusion ecosystem with players from science and business. Especially with the mammoth project of nuclear fusion, it applies: Everyone must pull together –

that is exactly what characterizes our Bavarian way. Many thanks to Bilfinger for the great commitment and the passion for progress."

Member of the Bavarian State Parliament Björn Jungbauer added: "It is great to see what a strong partner we have with Bilfinger Nuclear & Energy Transition GmbH in the region in order to be able to further advance the topic of nuclear fusion with know-how."

Bilfinger as Key Player in Nuclear Fusion

The Würzburg site of Bilfinger Nuclear & Energy Transition plays a central role in this endeavor. With over 60 years of experience in the nuclear industry and comprehensive expertise in the areas of new build, maintenance and modernization of plants, deactivation and decommissioning, waste management, and nuclear fusion, Bilfinger sets new standards. On an area of 4,600 m² and with numerous specialized working positions, the company offers state-of-the-art technologies in the fields of magnet, cryo, and vacuum technology.

"We are very pleased about the interest and support from the Bavarian State Government. The visit of the State Minister for Science and Art, Markus Blume, as well as the two members of the Bavarian State Parliament, Björn Jungbauer and Dr. Andrea Behr, underlines the importance of our site," explained Roland Pechtl, Vice President Business Unit Waste Management & Special Equipment at Bilfinger. "We welcome the fact that industry and politics are working hand in hand to ensure that Bavaria, from being a top know-how carrier in fusion, becomes a leading producer of fusion energy with components '*made in Bavaria*'."

Bilfinger supports Proxima Fusion, a spin-out of the Max Planck Institute for Plasma Physics, in the development of a high-performance stellarator for fusion power plants. This collaboration is based on the world's largest fusion test facility of the stellarator type, Wendelstein 7-X, located in Greifswald, Germany.

The Future of Energy

How does it work? Magnetic fusion, as pursued by Proxima Fusion, uses extremely strong magnetic fields to confine hydrogen gas, heat it to plasma, and release energy through the fusion of the plasma. The innovative stellarator concept uses a complex magnetic field to control the plasma without current in the plasma, making it suitable for non-pulsed continuous operation. This requires complexly shaped superconducting magnet coils, which are manufactured by Bilfinger.

Nuclear fusion is considered a highly attractive new type of power plant. The fuel is hydrogen, which means independence from gas deliveries and enables CO_2-neutral energy production. There is no risk of a chain reaction, and the amount of radioactive waste is limited. All these reasons speak in favor of making the fusion of hydrogen available to mankind.

Bilfinger positions itself as an important player in this growing, innovative market and makes a crucial contribution to the sustainable energy future of Bavaria and beyond.

Bilfinger is an international industrial services provider. The aim of the Group's activities is to increase the efficiency and sustainability of customers in the process industry and to establish itself as the number one partner in the market for this purpose. Bilfinger's comprehensive portfolio covers the entire value chain from consulting, engineering, manufacturing, assembly, maintenance and plant expansion to turnarounds and digital applications.

The company delivers its services in two service lines: Engineering & Maintenance and Technologies. Bilfinger is primarily active in Europe, North America and the Middle East. Process industry customers come from sectors that include energy, chemicals & petrochemicals, pharma & biopharma and oil & gas. With its ~30,000 employees, Bilfinger upholds the highest standards of safety and quality and generated revenue of €4.5 billion in financial year 2023. To achieve its goals, Bilfinger has identified two strategic thrusts: repositioning itself as a leader in increasing efficiency and sustainability, and driving operational excellence to improve the organizational performance.

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