

# PRESS RELEASE

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**Minister of Economics Dr. Bernd Althusmann visits the Wasserstoff Campus Salzgitter**

## **Ideal conditions for the hydrogen economy**

**Lower Saxony's Minister of Economics, Labor, Transport and Digitalization, Dr. Bernd Althusmann, visited the Wasserstoff Campus on the premises of Robert Bosch Elektronik GmbH in Salzgitter on the 4<sup>th</sup> of May, accompanied by Christoph Plett (CDU), Peine Member of the State Parliament, and Salzgitter's Lord Mayor Frank Klingebiel. Prof. Dr.-Ing. Christoph Herrmann, Director of the Fraunhofer Institute for Surface Engineering and Thin Films IST, introduced the visitors to the interdisciplinary project of research and industry addressing the use of green hydrogen.**

"With its combination of large-scale industry and science, the Wasserstoff Campus Salzgitter location offers ideal conditions for entry into the hydrogen economy. Here, a part of Salzgitter's aid is being put to good use, providing an important contribution towards establishing a hydrogen economy in Lower Saxony and making local companies fit for this major topic of the future," said Dr. Bernd Althusmann, Lower Saxony's Minister of Economics, during his visit.

The Minister was provided with an insight into two of the projects which have already been launched and which are being funded by the State, the project Fabriktransformation zur Dekarbonisierung von Fabriken (Factory transformation for the decarbonization of factories) and the project Speicherung von Wasserstoff in Stahltanks (Storage of hydrogen in steel tanks). The third project presented, which aims to conceptualize a green hydrogen supply for the Salzgitter region, starts this month. The Wasserstoff Campus Salzgitter is a collaborative project involving municipal stakeholders, research and economics with the aim of researching and testing the economically viable supply and utilization of hydrogen in industry. Together, they are pursuing the goal of implementing hydrogen technologies along the entire value chain from generation through to usage, thereby taking into account economic and ecological aspects, and establishing them as a training platform for specialists and executives.

The Deputy Director of the Braunschweig Regional Development Office, Astrid Paus representing the State Commissioner for Regional Development for Braunschweig Dr. Ulrike Witt, and Lord Mayor Klingebiel welcomed the guests. "The Wasserstoff Campus Salzgitter is driving forward the development of a hydrogen economy in Salzgitter. Companies, science and the municipality are working together here in an exemplary manner. It is now important to use this impetus to further advance regional networking. Our region has what it takes to become a nationally significant hydrogen region," said Astrid Paus.

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Lord Mayor Frank Klingebiel added: "Our Wasserstoff Campus is a flagship project for the industrial transition into a climate-friendly age. Together, we want to develop our city and region into a pioneer in hydrogen technology and thereby take on a role-model function." The Fraunhofer IST is the scientific partner on the Campus and supports all the sub-projects. With its strong background with respect to the holistic design of production systems, the IST is working in collaboration with industry to develop a roadmap for the decarbonization of factories by means of hydrogen technologies.

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For the realization of various project components and the pooling of activities, a hydrogen campus with laboratories and offices is being built on the Bosch premises in John-F.-Kennedy-Strasse in Salzgitter. Host Michael Gensicke, Managing Director of Robert Bosch Elektronik GmbH, and Rainer Krause, Managing Director of the regional energy supplier WEVG Salzgitter GmbH & Co. KG, provided the Minister with a presentation of the project Fabriktransformation zur Dekarbonisierung der Wertschöpfung mit H<sub>2</sub> (Factory transformation for decarbonization of value creation with H<sub>2</sub>). In cooperation with the Fraunhofer IST, a pilot factory with real hydrogen infrastructure is being built. This will involve the validation of simulation models in a real environment, the gathering of practical experience on the construction and operation of a hydrogen infrastructure, and the development of viable business and operating models. "We are currently installing solid oxide fuel cells (SOFC) as part of our energy supply and are planning to put them into operation shortly. The connection to the WEVG district heating network is also currently being implemented. In the near future, we will also install a photovoltaic system. We are rapidly gaining speed," says Michael Gensicke, Managing Director of Robert Bosch Elektronik GmbH.

The prerequisites for utilizing hydrogen in practice include transport and storage. Hydrogen tanks made from steel are inexpensive to manufacture and are also recyclable; the material costs are comparatively low and the manufacturing processes very economical. The application of ultra-high-strength steels for Type I tanks has, up to now, been limited by what is known as hydrogen embrittlement. "Together with the Fraunhofer IST, we would like to develop a barrier for the steel surface which prevents hydrogen embrittlement. The project promises great potential as regards increasing the utilized steel strengths and therefore reducing weight, costs and CO<sub>2</sub> emissions even further," says Dr. Benedikt Ritterbach, Managing Director of Salzgitter Mannesmann Forschung GmbH.

So how can an economically viable supply of green hydrogen become a reality in Salzgitter? The Wasserstoff Campus aims to answer this question. For this purpose, a study led by MAN Energy Solutions and the Fraunhofer IST will start in May 2021. Local production, transport from coastal regions and the import of hydrogen will thereby be compared both technically and economically, and a relevant customer market will be identified and developed, for example in rail transport or in steel production.

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Dr. Dirk Rosenau-Tornow, Managing Director of the Group Works Council of Volkswagen AG, said: "We, as the Group Works Council, are delighted that the ambitious plans of the Wasserstoff Campus Salzgitter are being supported via our Group brand MAN Energy Solutions. After all, green hydrogen has the potential to decarbonize industrial steel production and therefore to also sustainably reduce the CO<sub>2</sub> footprint in the production chain of automotive manufacturing."

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Prof. Dr.-Ing. Christoph Herrmann, Institute Director of the Fraunhofer IST, emphasized the region's potential for hydrogen research: "At the Wasserstoff Campus Salzgitter, the partners from industry, science and politics are pooling their competencies in order to demonstrate the industrial utilization of hydrogen along the entire value chain and to develop marketable solutions for decarbonization. The Fraunhofer IST is contributing its expertise in applied research on hydrogen technologies. Together, we want to realize the development paths for sustainable utilization concepts of green hydrogen in production and mobility. We see Salzgitter as a landmark region for the industrial, sustainable production and utilization of hydrogen."



Minister of Economics Dr. Bernd Althusmann visits the Wasserstoff Campus Salzgitter: from left to right: Managing Director of Salzgitter Mannesmann Forschung GmbH Dr.-Ing. Benedikt Ritterbach, Deputy Director of the Braunschweig Regional Development Office Astrid Paus, Managing Director of WEVG Salzgitter GmbH & Co. KG Rainer Krause, state parliament member for the SPD Dunja Kreiser, Director of the Fraunhofer IST Prof. Dr.-Ing. Christoph Herrmann, Minister of Economics Dr. Bernd Althusmann, Managing Director of Robert Bosch Elektronik GmbH Salzgitter Michael Gensicke, state parliament member for the CDU Christoph Plett, state parliament member for the SPD Stefan Klein, Lord Mayor of Salzgitter Frank Klingebiel.

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