

## **PRESS RELEASE**

January 16, 2018

### **voestalpine and its partners get the green light to build the world's largest industrial hydrogen pilot plant in Linz**

**voestalpine has long been regarded as an environmental and efficiency benchmark in its industry, as well as a driver of innovation. Now the technology and capital goods group can complete another step towards realizing the H2FUTURE research project funded by the EU: the government of Upper Austria as the responsible EIA authority has recently authorized construction of the world's largest pilot plant of its type for CO<sub>2</sub>-free production of hydrogen at the site in Linz. Together with five project partners, voestalpine is laying the foundations for further pioneering research into de-carbonizing the steel manufacturing process.**

Gaining official approval is the starting signal for building the new hydrogen electrolysis plant at the voestalpine premises in Linz. This will be the largest and most advanced plant of its type for generating "green", i.e. CO<sub>2</sub>-free, hydrogen. With EUR 18 million in EU funding, the project will conduct research which explores, amongst others, the potential use of hydrogen in the individual stages of steel production.

#### **Researching breakthrough technologies**

"In view of the EU's 2030 climate and energy goals, both industry and utilities face enormous energy-related challenges which demand fundamental technological changes. For years voestalpine has been taking steps towards gradually de-carbonizing the steel production process. This hydrogen pilot plant is finally paving the way for research into true breakthrough technologies," says Wolfgang Eder, Chairman of the Management Board of voestalpine AG. The long-term goal is to move away from coal and coke, via bridging technology based on natural gas (e.g. in the direct reduction plant in Texas), to use "green" hydrogen in the production process. Realistically, it will take around a couple of decades before these processes can be used on an industrial scale. "Furthermore, a technological transformation can only take place when renewable energy is sufficiently available and at competitive prices," explains Eder.

#### **Construction to start in the coming weeks**

The pilot plant will be erected in a new building immediately adjacent to the voestalpine power plant at the site in Linz. "Now that official approval has been given, we can begin with actual implementation and start the preparatory construction work. Establishing this research facility is a technological flagship project not only for voestalpine, but also for Linz, and represents an important investment in the future of the region," says Herbert Eibensteiner, Member of the Management Board of voestalpine AG and Head of the Group's Steel Division, based in Linz. The individual plant components are scheduled for delivery as early as this summer, and testing should commence before the year is over.

## voestalpine AG

The centerpiece of the new research facility will be the world's largest PEM (proton exchange membrane) electrolyser, with a capacity of six megawatts and able to produce 1,200 m<sup>3</sup> of hydrogen an hour. The electrolysis system developed by project partner Siemens will achieve a higher output efficiency than comparable systems to date. In a PEM electrolyser electrical energy—in this case electricity generated from renewable sources by project partner Verbund—is used to break down water into its constituent parts, hydrogen and oxygen. The aim of H2FUTURE is to test this next development step in PEM technology on an industrial scale, as well as to trial its use in the electricity balancing market.

### About H2FUTURE

The H2FUTURE project consortium consists of voestalpine, VERBUND, and Siemens, as well as the Austrian Power Grid (APG), together with scientific partners K1-MET (Metallurgical Competence Center) and ECN (Energy research Centre of the Netherlands). The project is funded as part of the European Commission's Horizon 2020 program (Joint Undertaking Fuel Cells and Hydrogen) through to 2021.

### The voestalpine Group

In its business segments, voestalpine is a globally leading technology and capital goods group with a unique combination of material and processing expertise. voestalpine, which operates globally, has around 500 Group companies and locations in more than 50 countries on all five continents. It has been listed on the Vienna Stock Exchange since 1995. With its top-quality products and system solutions using steel and other metals, it is one of the leading partners to the automotive and consumer goods industries in Europe as well as to the aerospace and oil & gas industries worldwide. The voestalpine Group is also the world market leader in turnout technology, special rails, tool steel, and special sections. In the business year 2016/17, the Group generated revenue of EUR 11.3 billion, with an operating result (EBITDA) of EUR 1.54 billion; it has around 50,000 employees worldwide.

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