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**Press Release**Hamburg, October 1, 2024

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**MAN Energy Solutions SE**  
Stadtbachstraße 1, 86153 Augsburg  
GermanyPostal address:  
86224 Augsburg, Germany[www.man-es.com](http://www.man-es.com)

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**Group Communications**  
Jan Hoppe  
P +49 821 322 3126  
[jan.hoppe@man-es.com](mailto:jan.hoppe@man-es.com)

# Important milestone for the green hydrogen economy: Quest One and MAN Energy Solutions open new gigahub

## German Federal Chancellor Olaf Scholz inaugurated the most modern production facility in the hydrogen economy in Hamburg

Electrolysis specialist Quest One, a subsidiary of MAN Energy Solutions, has opened its new 'Gigahub' for the serial and automated production of electrolysis stacks in Hamburg. In the presence of German Chancellor Olaf Scholz and Peter Tschentscher, First Mayor of the German city Hamburg, Uwe Lauber, CEO of MAN Energy Solutions, and Quest One CEO Robin von Plettenberg kicked off a new phase in the ramp-up of the hydrogen economy.

The series production of stacks will increase the availability of green hydrogen, as they are the technological centrepiece of an electrolyser that can be used to produce green hydrogen. Among the more than 800 guests at the opening ceremony were Till Mansmann, Commissioner for Green Hydrogen of the German Federal Ministry of Education and Research, Michael Kellner, Parliamentary State Secretary of the German Federal Ministry of Economics and Climate Protection, Hamburg's Senator for Economics Melanie Leonhard and other high-ranking representatives from politics and business, such as the Chairman of the Supervisory Board of Volkswagen AG, Hans Dieter Pötsch, and the Chairman of the Supervisory Board of MAN Energy Solutions, Gunnar Kilian. With the opening of the new production site, the company, formerly known as H-TEC SYSTEMS, changes its name and officially becomes 'Quest One'.

German Federal Chancellor Olaf Scholz: "Today, Hamburg-Rahlstedt is sending out a signal. Until now, electrolysers have been made by hand. If the step towards automated production on an industrial scale is successful, the costs and time required for production will fall. Serial production should reduce the production time here in Rahlstedt by 75 percent. This is a real milestone for the rapid hydrogen ramp-up and shows what is possible in our country."

The hydrogen technology specialist is starting the serial and automated production of so-called PEM electrolysis stacks for the production of green hydrogen at the new site. PEM electrolysis, which is based on proton exchange membrane (PEM) technology, is one of the most important processes for industrially scaled hydrogen production from renewable energies. The series production is an important step towards making green hydrogen available in large quantities and thus becoming a reliable alternative to fossil fuels. The climate-neutral conversion of the industry with its high energy requirements is an important area of application. The new production and development site plays a central role in realising the Quest One mission of avoiding one percent of global greenhouse gas emissions by 2050 through the use of its own electrolysers.

Uwe Lauber, CEO of MAN Energy Solutions: “Today we are opening Europe’s most modern production plant in the hydrogen economy. MAN Energy Solutions and Quest One are thus making a substantial contribution to the establishment and industrialisation of sustainable future technologies in Germany and Europe. We are thus investing in the future of Germany as a business location and in the energy transition as a task for society as a whole. Because there is no alternative for a climate-neutral future. MAN Energy Solutions, as one of the oldest industrial companies in the world, will continue to work towards this goal.”

### **Automated production of PEM stacks using automotive industry methods**

At full capacity, the new gigahub will enable the automated series production of PEM stacks with a potential total electrolysis capacity of over five gigawatts per year. Stacks are the technological centerpiece of electrolyzers and split water into oxygen and hydrogen with the help of renewable electricity. They therefore play a key role in the ramp-up of the future hydrogen economy. This is why the MAN Energy Solutions subsidiary in Hamburg is also researching new generations of stacks.

Robin von Plettenberg, CEO of Quest One: “The hydrogen economy will change massively in the coming years and decades, and we will be dealing with volumes that are almost unimaginable today. Thus, the electrolysis industry will become one of the key industries of the future. With our gigahub, we are opening one of the most modern sites for PEM technology, development and production in the world here in Hamburg. However, this also emphasises that we want to become a leading player in the hydrogen economy. Our goal is to use our products to avoid one per cent of global greenhouse emissions by 2050.”

The highly automated stack production takes place on two production lines: “Titan” with a linear transport system and “Gerd” with swivelling arm robots. They are named after two moons of the planet Saturn, which itself consists of around 95 per cent hydrogen. Many work steps that were previously carried out by hand are now automated which reduces the production time of a stack by around 75 per cent – they can now be produced in Hamburg in less than an hour. The automated production also increases the company’s efficiency and precision in manufacturing and optimising logistics processes, resulting in consistently high product quality and fast delivery times.

Dr. Peter Tschentscher, First Mayor of the Free and Hanseatic City of Hamburg: “The availability of green hydrogen is a crucial factor for the energy transition and the competitiveness of the German industry. The opening of the Quest One Gigahub is a milestone in this respect. Hamburg is becoming a leading hydrogen location in Germany. Together with our international energy partners, we are strengthening the Port of Hamburg as an important transshipment point for hydrogen in Europe.”

The automated stack production is part of the PEP.IN research project and was funded by the hydrogen lead project H2Giga of the German Federal Ministry of Education and Research (BMBF). The aim is to research innovative processes for

the competitive and series production of PEM electrolysis stacks and electrolyzers in Germany in order to make green hydrogen affordable and competitive.”

### **Production and development under one roof**

The Gigahub was built in just one and a half years on a site measuring over 26,000 square metres in Victoria Park, an industrial park in Hamburg, Germany, and sustainability played a central role in the development of the Gigahub. For example, the green roofs are equipped with a photovoltaic system. Platinum certification from the German Sustainable Building Council (DGfB) is being targeted for 2025. The floor area of the new gigahub is over 12,000 square metres. Initially, around 200 employees will work here in a modern environment in the areas of production, development, testing and service. The site will also serve as a customer and training centre.

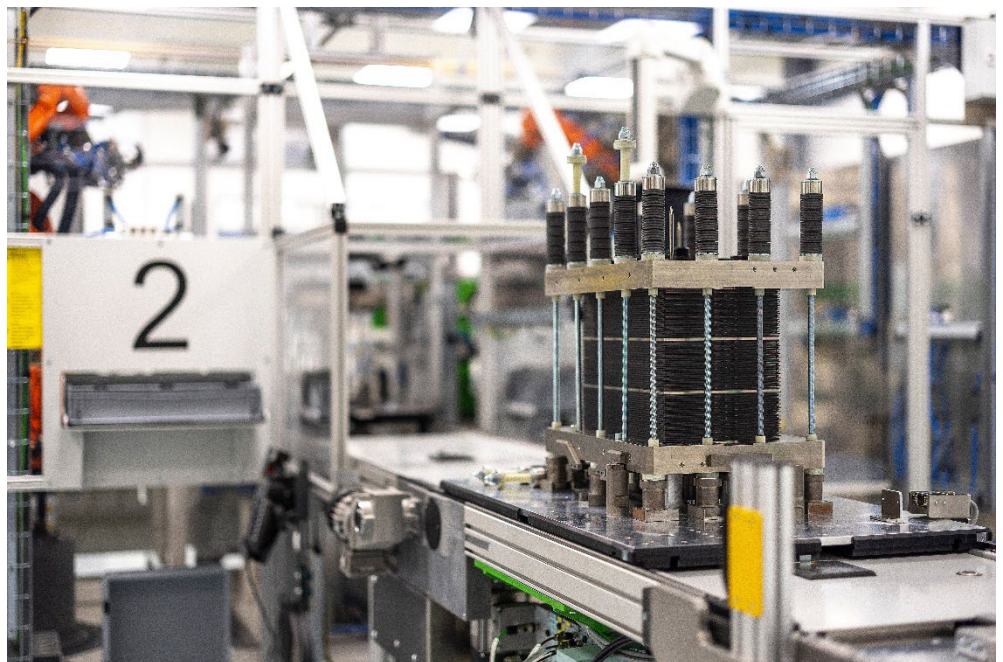
### **About Quest One**

Quest One is a global leader in the field of PEM electrolysis. The company develops and produces innovative electrolyzers and electrolysis stacks for the economical, efficient and reliable production of green hydrogen. Quest One's declared goal is to avoid one per cent of global greenhouse gas emissions by 2050 through the use of its own products. Founded as a scientific project in 1997 under the name 'H-TEC Hydrogen Energy Systems', Quest One has been a subsidiary of MAN Energy Solutions and Volkswagen since 2021. The company thus combines decades of experience in the field of electrolysis technology with the comprehensive expertise of its shareholders in the realisation of large-scale projects in heavy industry and automotive mass production expertise. Quest One employs around 550 people at three locations: production and development of the electrolysis stacks are based in Hamburg, while the electrolyzers are produced at the Augsburg site. The company has a further site in Houston in the USA.

For more information, please visit: [www.questone.com](http://www.questone.com)



*German Federal Chancellor Olaf Scholz (front, left) together with Robin von Plettenberg (front, 2nd from left), CEO Quest One; Peter Tschentscher, First Mayor of Hamburg (front, 3rd from left) and Uwe Lauber, CEO MAN Energy Solutions (front, right) visit the electrolysis stack production at Quest One's Gigahub in Hamburg (©Quest One)*



*Electrolysis stacks for the production of green hydrogen are manufactured in Quest One's newly opened gigahub in Hamburg (©Quest One)*

MAN Energy Solutions enables its customers to achieve sustainable value creation in the transition towards a carbon neutral future. Addressing tomorrow's challenges within the marine, energy and industrial sectors, we improve efficiency and performance at a systemic level. Leading the way in advanced engineering for more than 250 years, we provide a unique portfolio of technologies. Headquartered in Germany, MAN Energy Solutions employs some 14,000 people at over 120 sites globally. Our after-sales brand, MAN PrimeServ, offers a vast network of service centres to our customers all over the world.