

# PRESS RELEASE

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## **H2GO – National Fuel Cell Production Action Plan Starting signal for the hydrogen age in freight mobility**

**German Federal Minister for Transport Dr. Volker Wissing handed over the funding notification for “H2GO – National Fuel Cell Production Action Plan” for around 80 million euros in Berlin today. H2GO bundles the activities of 19 Fraunhofer institutes with the aim of significantly reducing CO2 emissions in freight mobility. The focus is on the development and rollout of industrial technologies for the economical production of fuel cells, primarily for road-based heavy-duty transport. The Fraunhofer Institute for Machine Tools and Forming Technology IWU is responsible for the overall coordination of the research network with a total of five sub-groups.**

Rising traffic volumes in road freight transport are causing CO2 emissions in this segment to rise continuously – despite advances in consumption and exhaust technology. The need to develop alternatives to fossil fuels is therefore particularly great in heavy-duty transport. 19 Fraunhofer institutes are working at high speed to create the conditions for efficient large-scale production of fuel cells that convert hydrogen into electricity on board a vehicle. The mission of the H2GO action plan is to develop technological solutions that will enable fuel cell production to ramp up quickly.

“The alliance with Fraunhofer-Gesellschaft takes the development of fuel cell production to a new level. With our funding, we want to help generate marketable products in the field of fuel cell technology from successful research and development – and, if possible, on an industrial scale,” emphasizes Dr. Volker Wissing, Federal Minister for Digital and Transport. “The solutions developed will be made available digitally to all partners involved in a virtual reference factory. This strengthens the competitiveness of our domestic industry and makes a significant contribution to substantially reducing the costs of hydrogen vehicles in heavy-duty transport. We urgently need climate-friendly offerings.”

“Hydrogen is a key element of the energy transition. For hydrogen to become widely accepted as an energy carrier, it must be produced at market prices, in sufficient quantities and in a climate-neutral manner, and used with a high CO2 reduction rate. In heavy-duty transport, this requires in particular cost-effective, robust technologies for the economic production of fuel cells,” says Prof. Reimund Neugebauer, President of the Fraunhofer-Gesellschaft. “H2Go will make a crucial contribution to producing fuel cells economically and in industrial series. This will not only take us an important step

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forward in terms of climate policy, but will also develop fuel cell production into a key area of expertise for Germany and Europe as a business location."

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Manufacturing technologies and processes must be upgraded for efficient, cost-effective and highly profitable industrial series production. H2GO will create the conditions for this via production technology research, development and preparation for industrial implementation. "H2GO is also aimed in particular at small and medium-sized enterprises that map the entire value chain of fuel cell production and close all the way to application in freight mobility. This involves manufacturing expertise, but we also explicitly address the necessary mechanical and plant engineering," says Prof. Welf-Guntram Drossel, Executive Director of Fraunhofer IWU.

Fuel cell electric vehicles (FCEV) can play a key role in CO<sub>2</sub>-neutral long-distance transportation in the future: In technological terms, fuel cells offer similar volume and weight payloads with comparable ranges and refueling times compared to today's fossil fuel drive technologies. This allows shipping companies to retain the flexibility they are accustomed to in truck operations today. Compared to other zero-emission drive systems, FCEV are economically and ecologically competitive, especially in heavy-duty transport – assuming a successful market ramp-up that creates cost parity for hydrogen compared to fossil fuels. In terms of industrial policy, hydrogen offers a unique opportunity not only to promote climate protection and broaden the energy supply in the mobility sector. For Germany as a production location, it can generate additional added value and thus an extensive, sustainable and future-proof business field. H2GO will help secure significant shares for the German economy in the highly dynamic global fuel cell market. A rapidly established fuel cell industry can thus become a central area of expertise for German companies.

The action plan is designed to link industry and research into a strong ecosystem for economically sustainable fuel cell production in order to make fuel cell technology transparent, tangible and usable for society. H2GO will provide support to German industry on several levels to increase its productivity and innovative strength. For example, an especially developed framework fans out several transfer lines with various customized modules that contain basic principles for fuel cell production. Companies can participate in the information provided and thus develop their production elements. In addition, digital pilot lines are set up based on virtual images of the production elements. These offer great assistance for efficiently considering the value chain. Solutions are also available for the process ramp-up of future series production, which help to eliminate any start-up problems so that error-free production can be realized quickly.

This provides companies with a comprehensive package of services during the transition to large-scale fuel cell production – from initial analysis to series production. H2GO also includes many opportunities to realize sampling, provision, manufacturing research and joint spin-offs in collaborative projects or direct cooperations.

The H2GO project is formed by 19 Fraunhofer institutes in a total of 9 federal states, which use their research competencies and infrastructures as well as local networks to develop new manufacturing solutions in regional technology hubs. These are clustered into four technology sub-groups and strengthened in a targeted manner with the involvement of numerous initiatives at state and federal level. A further, superordinate sub-network "Virtual Reference Factory" provides digital images of the developed production solutions and thus enables synergetic integration in a virtual reference architecture for fuel cell production.

The funding period extends until the end of 2025, and the German Federal Ministry for Digital and Transport is funding H2GO with around 80 million euros from the resources of the Automotive Industry Future Fund in accordance with the recommendations of the expert committee. The funding is coordinated by NOW GmbH. Implementation is being carried out by Projektträger Jülich (PtJ).



**Federal Minister for Transport Dr. Volker Wissing handing over the funding decision of about 80 million euros to Prof. Reimund Neugebauer, President of Fraunhofer-Gesellschaft.**  
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**Fuel cells convert hydrogen into electricity on board of a vehicle.**

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**Prof. Reimund Neugebauer, President of the Fraunhofer-Gesellschaft and Prof. Welf-Guntram Drossel, Director of Fraunhofer IWU (with certificate), with representatives of industry (Alstom, Aumann, Capgemini, Schaeffler, Trumpf, EKPO) after the funding notification handover for H2GO at the Federal Ministry for Digital and Transport. Also in the picture: Kurt-Christoph von Knobelsdorff (Managing Director of NOW GmbH), Christoph Baum (Managing Director Fraunhofer IPT), Ulf Groos (Head of Fuel Cell Systems at Fraunhofer ISE) and Dr. Ulrike Beyer (Head of the Hydrogen Taskforce at Fraunhofer IWU).**

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