

Joint Press Release

## HYDROGEN REFUELING NOW POSSIBLE IN ULM

- **Daimler, Linde and Total advance expansion of the hydrogen infrastructure**
- **Germany already has 21 public hydrogen filling stations, seven of them in Baden-Württemberg**
- **Funded by the Federal Ministry of Transport under the National Innovation Programme for Hydrogen and Fuel Cell Technology (NIP)**
- **Centre for Solar Energy and Hydrogen Research Baden-Württemberg (ZSW) responsible for the accompanying research**

Berlin/Ulm, 15 July 2016 – The network of hydrogen (H<sub>2</sub>) filling stations in Germany is growing: Daimler, Linde, Total, and the Centre for Solar Energy and Hydrogen Research Baden-Württemberg (ZSW) jointly hosted the official opening of another hydrogen fuel pump in Ulm today. After openings at the Geiselwind motorway service area, at two locations in Berlin, and a station in Fellbach, Baden-Württemberg, the partners have now taken a further step towards a nationwide H<sub>2</sub> supply network.

To date, 21 hydrogen filling stations have been completed in Germany. They are funded as research and development projects by the German federal government through the National Innovation Programme for Hydrogen and Fuel Cell Technology (NIP). The existing filling stations already reach some six million people in the metropolitan regions of Berlin, Hamburg, the Rhine/Ruhr, Stuttgart and Munich. Seven stations are located in Baden-Württemberg alone, with five more planned in the region.

Within the NIP expansion programme, Daimler and Linde are participating in a total of 20 new H<sub>2</sub> stations with a total investment of around 20 million euros. Total operates the hydrogen pump in Ulm and paid for its construction.

Located on the grounds of ZSW on Helmholtzstrasse, the new station is part of the Clean Energy Partnership (CEP). Its official opening was attended by senior representatives of the companies involved, as well as representatives from the federal government and the Baden-Württemberg Environment Ministry.

Dr. Klaus Bonhoff, Managing Director of the National Organisation for Hydrogen and Fuel Cell Technology (NOW), said: "The system – from hydrogen production to refuelling, through to the customer's vehicle – works. This is one of the most important results of the National Innovation Programme for Hydrogen and Fuel Cell Technology, which expires in its current form at the end 2016. As part of the Clean Energy Partnership, the federal government has invested more than 110 million euros of funding in testing the technology for its suitability for everyday use since 2008. Now, in a first expansion stage, 50 hydrogen filling stations are being built, jointly funded

by government and industry. The filling station in Ulm, whose construction and operation the federal government is funding with close to a million euros, closes the Munich-Stuttgart corridor.”

Norbert Barthle, Parliamentary State Secretary at the Federal Ministry of Transport and Digital Infrastructure, commented: “The market ramp-up of electric cars is beginning, and the vehicle manufacturers’ offers are becoming more varied and attractive. To get e-cars onto the road, we now need an extensive network of H<sub>2</sub> filling stations in Germany – in the cities, along the autobahns and also in more rural areas. The establishment of the station in Ulm is another important component in this.”

The technical maturity of fuel-cell vehicles is now beyond question, and the benefits of the technology are obvious: a long range, quick refuelling times and a wide range of possible applications, from cars to city buses. Daimler AG has focused on fuel cells alongside battery-powered electric drives from the start. Electric vehicles with fuel cells are locally just as emissions-free as battery-powered vehicles, but have a much greater range and shorter refuelling time.

“Following the success of the Mercedes-Benz B-Class F-CELL, a new generation of vehicles based on our GLC will launch from 2017. For the first time in an electric fuel-cell vehicle, a lithium-ion battery will be used as an independent drive mode. So in the next step our fuel cell will be getting a plug,” said Professor Dr. Christian Mohrdieck, Head of Fuel Cells at Daimler AG. “In view of the market launch, the rapid development of infrastructure is a top priority. We are proud to be able to make an important contribution to this, not least as part of the H<sub>2</sub> Mobility joint venture.”

“In arithmetical terms, the hydrogen fuelling capacity currently installed in Germany can already accommodate more than 8,000 fuel cell vehicles,” said Dr. Dieter Prangenberg, responsible for the Southern sales region at Linde. “Three quarters of German H<sub>2</sub> service stations are equipped with Linde technology, as is the one in Ulm.”

Guillaume Larroque, Director of Service Stations at Total Deutschland GmbH, said: “We’ve been investing in hydrogen mobility research and development since 2002. Initially our efforts centred on defining common standards for tank technology together with our partners. As a leading player in the network expansion, Total alone operates nine of Germany’s 21 public H<sub>2</sub> stations!”

### **About Daimler AG**

Daimler AG is one of the world's most successful automotive companies. With the divisions of Mercedes-Benz Cars, Daimler Trucks, Mercedes-Benz Vans, Daimler Buses and Daimler Financial Services, the Daimler Group is one of the biggest producers of premium cars and the world's biggest manufacturer of commercial vehicles with a global reach. As a pioneer of automotive engineering, Daimler continues to shape the future of mobility today. The company focuses on innovative and green technologies as well as on safe and superior cars that appeal and fascinate. Daimler systematically invests in the development of alternative drive systems – up to purely electric vehicles with battery or fuel cell hybrid vehicles - with the goal of making emission-free driving possible in the long term. Moreover, the company vigorously promotes accident-free driving and an intelligent network, through to autonomous driving, because Daimler willingly accepts the challenge of meeting its responsibilities towards society and the environment.

Further information about Daimler is available online at:

[www.media.daimler.com](http://www.media.daimler.com) and [www.daimler.com](http://www.daimler.com)

### **About The Linde Group**

In the 2015 financial year, the Linde Group generated revenues of EUR 17.944 billion, making it the largest gases and engineering company in the world with approximately 65,000 employees working in more than 100 countries worldwide.

The Linde Group's strategy is geared towards long-term, profitable growth and focuses on the expansion of its international business with forward-looking products and services.

Linde acts responsibly towards its shareholders, business partners, employees, society, and the environment – in every one of its business areas, regions and locations worldwide. Linde is committed to technologies and products that unite the goals of customer value and sustainable development.

Information about The Linde Group is available online at [www.linde.com](http://www.linde.com)

### **About Total**

Germany plays a leading role in testing hydrogen in the transport sector, and TOTAL has operated hydrogen service stations since 2002. We have served as a reliable partner in supporting various demonstration projects alongside car manufacturers and industrial gas producers. Hydrogen can play an important role as a storage medium for renewable energy and for the energy transition. TOTAL operates a total of nine H<sub>2</sub> stations in Germany: four in Berlin and one each in Fellbach near Stuttgart, Hamburg, Munich and Ulm, and the first motorway station with a hydrogen fuel pump in Geiselwind. More are planned in Bavaria, Baden-Württemberg, Hamburg and North Rhine-Westphalia, among other places, as part of the federal government's programme of 50 H<sub>2</sub> service stations.

[www.de.total.com](http://www.de.total.com)

### About ZSW

The Centre for Solar Energy and Hydrogen Research Baden-Württemberg (ZSW) is one of the leading institutes for applied research in the fields of photovoltaics, renewable fuels, battery technology and fuel cells and energy systems analysis. Some 230 scientists, engineers and technicians are currently employed at three ZSW sites in Stuttgart, Ulm and Widderstall, plus 90 scientific and student assistants. The ZSW is supporting the expansion of the hydrogen infrastructure with accompanying research into hydrogen and fuelling quality, funded by the Baden-Württemberg Ministry of the Environment.

[www.zsw-bw.de](http://www.zsw-bw.de)

### About CEP

The Clean Energy Partnership – an alliance of twenty leading companies – has set itself the goal of establishing hydrogen as the ‘fuel of the future’. With Air Liquide, BMW, Bohlen & Doyen, Daimler, EnBW, Ford, GM/Opel, H<sub>2</sub> Mobility, Hamburger Hochbahn, Honda, Hyundai, Linde, OMV, Shell, Siemens, Stuttgarter Straßenbahnen SSB, Total, Toyota, Volkswagen and Westfalen as its partners, the ground-breaking future project includes technology, oil and utility companies as well as most German car manufacturers and two leading public transport companies. Germany’s National Innovation Programme for Hydrogen and Fuel Cell Technology (NIP) has sponsored the CEP since 2008. [www.cleanenergypartnership.de](http://www.cleanenergypartnership.de)

### About NOW

NOW GmbH (National Organisation Hydrogen and Fuel Cell Technology) was founded in 2008 by the Federal Government, represented by the Federal Ministry of Transport, Building and Urban Development (today the Federal Ministry of Transport and Digital Infrastructure — BMVI). NOW coordinates and manages two federal development programmes — the National Innovation Programme for Hydrogen and Fuel Cell Technology (NIP) as well as the BMVI’s Electromobility Model Regions. Both programmes serve to prepare the market for ensuring efficient, eco-friendly mobility and energy supply in the future. Funding is focused on research and development as well as demonstration projects.

[www.now-gmbh.de](http://www.now-gmbh.de)

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