

General press release

FIRST GROUNDBREAKING CEREMONY FOR A TOTAL MULTI-ENERGY FILLING STATION IN ROSTOCK

- Hydrogen and electric fast charging points, as well as conventional fuels at the filling station
- Mecklenburg-Vorpommern's first hydrogen station, n° 10 for TOTAL
- Direct connection to a local wind farm nearby, through buffer battery storage
- Groundbreaking ceremony with Energy Minister Christian Pegel
- The German government supports the facility with an investment of almost EUR 700,000 through the NIP (National Innovation Programme Hydrogen and Fuel Cell Technology – NIP)

Rostock, 2 September 2016 – **Emission-free mobility in Mecklenburg-Vorpommern.** From spring 2017, you will be able to charge or refuel your electric vehicle, be it fuel cell-powered or battery driven at the TOTAL filling station at 98 Tessiner Strasse in Rostock. Today (Friday), the groundbreaking ceremony for the conversion of the site to a TOTAL multi-energy filling station took place, and was attended by Christian Pegel, Energy Minister for Mecklenburg-Vorpommern. A 3-in-1 electric fast charging point with a combined charging system (CCS), CHAdeMO and a 2-way charging system will offer all of the standard connections for charging electric cars. From spring 2017, those who rely on hydrogen as an energy source will also be able to easily refuel their electric vehicles in just three minutes.

The power for the charging points in conjunction with an innovative buffer battery storage, is provided directly by wind turbines (WT), just outside of the Hanseatic city of Rostock at nearby located Dummerstorf. The commissioning of the two wind turbines (WT) which are to be integrated into the project, and which each have a capacity of 2.4 MW, is scheduled for the second quarter of 2017. Over the coming months, the Nordex 117 WT will be manufactured in Rostock, and then installed and fitted with a 20 kV distribution line. The power line is the direct connection between the WT and the transformer station with buffer battery storage and grid connection to the TOTAL multi-energy filling station.

The partners realise for the very first time a direct connection between the wind farm and the service-station, under the direction of WIND-projekt GmbH. This makes it possible, on the one hand, to use green wind energy from the region for low-emission mobility, and on the other hand to ensure the electricity requirement for the whole plant is met. Due to the hydrogen storage and the compressed pressure level, energy is also required at the pump. During refuelling, the compressor station provides hydrogen gas at the required pressure of 700 bar.

At the groundbreaking ceremony, Christian Pegel, Energy Minister for Mecklenburg-Vorpommern, said: *“We appreciate the fact that the different participants in this energy*

revolution are working together to produce innovative products with which to convince the population to change over to alternative vehicles. The State of Mecklenburg-Vorpommern is a pioneer when it comes renewable energy – and the project partners demonstrate how flexibly and intelligently renewable energy can be used in the field of mobility in the future!”

The Federal Ministry of Transport and Digital Infrastructure (BMVI) supports the establishment and operation of the hydrogen filling station as part of the National Innovation Programme for Hydrogen and Fuel Cell Technology (NIP). The first step of the market launch of hydrogen-powered fuel cell vehicles in Germany is supported by the construction of 50 hydrogen filling stations. The NIP is coordinated by the National Organisation for Hydrogen and Fuel Cell Technology (NOW).

As Dr Klaus Bonhoff, Managing Director of NOW pointed out: “*In recent years, as part of NIP, industry, politics and science have tested the technology and interaction of the different sectors for fuel cell vehicles, and refuelling with hydrogen under everyday conditions. The hydrogen filling station on Tessiner Strasse in Rostock is part of the nationwide expansion of a hydrogen infrastructure, and is funded by the Federal Ministry of Transport to the tune of around 700,000 euros. The government and the industry wanted to configure the initiated process in the marketing phase.*”

Future model for sustainable mobility and decentralised energy supply. The TOTAL multi-energy filling station in Rostock is another milestone in the nationwide introduction of electromobility. With the direct use of green electricity, Germany can achieve its ambitious climate targets. For example, the hydrogen for the filling station in Rostock is also produced from renewable sources. A dedicated facility is able to obtain green hydrogen from a peak capacity of wind energy, by means of water-based electrolysis.

Whether stored in batteries or in hydrogen, the use of regenerative energy as fuel is already technically possible. The benefits for the environment and quality of life are twofold. Both battery-powered vehicles and electric cars with fuel cells are emission-free and quiet. Alternative drive systems also contribute to grid stability – on the one hand as a means of storage for renewable energy, and on the other with their great load transfer potential.

Mecklenburg-Vorpommern’s first hydrogen station; TOTAL’s 10th hydrogen station.

The new hydrogen pump in Rostock is part of the EUR 20 million BMVI programme to fund 50 hydrogen filling stations. With H2MOBILITY, structures have been built in Germany with which to construct a nationwide hydrogen infrastructure with up to 400 stations, and which can be efficiently and sustainably operated from a single source. The construction of a nationwide H2 infrastructure is accompanied by the planned market acceleration of fuel cell vehicles by European and Japanese manufacturers.

3-in-1 electric quick charger with green energy

A special feature of the project is the battery buffer. With a gross capacity of 45 kWh, this provides a charging/unloading capacity of 40 kW (3-phase, 230V/400V) with an integrated energy management system. To date, approximately 50 electric charging stations have been installed in Mecklenburg-Vorpommern, including seven in Rostock/Warnemünde alone. Stadtwerke Rostock will operate the two multi-energy electric charging points at the TOTAL multi-energy filling station.

The groundbreaking ceremony was a high-level visit. Guests included Guillaume Laroque, Director of Filling Stations for TOTAL Germany, Carlo Schmidt, CEO of WIND-projekt GmbH; Nikolas Iwan, CEO of H2 MOBILITY Germany, and Jörg Hempel, Managing Director of Nordex Germany.

About H₂MOBILITY

H₂MOBILITY Deutschland GmbH & Co.KG is responsible for the comprehensive construction of a hydrogen infrastructure for supplying fuel cells to passenger cars in Germany. The first aim is to operate around 100 stations in six urban areas in Germany (Hamburg, Berlin, Rhine-Ruhr, Frankfurt, Stuttgart and Munich), as well as along trunk roads and motorways, by 2018/19. By 2023, up to 400 hydrogen stations – the world's largest network of hydrogen filling stations – should guarantee a nationwide supply. H2 MOBILITY performs all operational tasks, including network planning, licensing, procurement, installing and operating. Our partners are Air Liquide, Daimler, Linde, OMV, Shell and TOTAL. BMW, Honda, Intelligent Energy, Toyota and Volkswagen advise H2 MOBILITY as associate partners. h2-mobility.de

About TOTAL

Supplying affordable energy to a growing population, addressing climate change and meeting new customer expectations are the three main challenges Total must meet as an energy major. That is what guides what we do. With operations in more than 130 countries, we are a top-tier international oil and gas company. We are also a world-class natural gas operator and a global solar leader through our affiliate SunPower. Our activities span oil and gas production, refining, petrochemicals and marketing. Demonstrating their commitment to better energy, our 100,000 employees help supply our customers worldwide with safer, cleaner, more efficient and more innovative products that are accessible to as many people as possible. Our ambition is to become the responsible energy major. de.total.com

About WIND-projekt

WIND-projekt GmbH is an independent engineering company based near Rostock, and is one of the State's leading players in the field of innovative energy projects. In addition to the planning and operation of wind turbines, the focus is on energy storage and linking the various energy sectors. The challenges of the energy revolution are as versatile as the application examples. Moreover, WIND-projekt is committed to the field of green mobility and operates, inter alia, the first hydrogen-powered vehicle in Mecklenburg-Vorpommern. With this project approach, WIND-projekt continues consistently in this way for the demand-oriented provision of regenerative energy, and directly combines the use of wind energy with the provision of fuel in a sustainably mobility infrastructure for the first time in M-V. wind-projekt.de

About Nordex

The Nordex Group (Nordex and Acciona Windpower) has installed more than 18 GW in over 25 markets. In 2015, it achieved a turnover of EUR 3.4 billion, and currently employs more than 5000 people. The manufacturing network includes sites in Germany, Spain, Brazil, the USA, and (in the near future) India. The range of products focuses on 1.5 to 3.6 MW onshore turbines which are adapted to the market demands of developed and emerging countries. nordex-online.com

About CEP

The Clean Energy Partnership – a coalition between 19 leading companies – has set itself the task of establishing hydrogen as the “fuel of the future”. With Air Liquide, BMW, Bohlen & Doyen, Daimler, EnBW, Ford, GM/Opel, Hamburger Hochbahn, Honda, Hyundai, Linde, OMV, Shell, Siemens, Stuttgarter Strassenbahnen SSB, TOTAL, Toyota, Volkswagen and the Westfalen Group, technology, oil and energy companies, as well as the majority of the leading automotive manufacturers and leading public transport operators, are able to participate in a pioneering project for the future. Since 2008, the CEP has been funded by the National Innovation Programme for Hydrogen and Fuel Cell Technology (NIP). cleanenergypartnership.de

About NOW

The NOW GmbH National Organisation for Hydrogen and Fuel Cell Technology was founded in 2008 by the German government, and is represented by the Federal Ministry of Transport, Building and Urban Development (now the Federal Ministry of Transport and Digital Infrastructure). It coordinates and manages two federal funding programmes – the National Innovation Programme for Hydrogen and Fuel Cell Technology (NIP), and the BMVI Electromobility of Model Regions programme. Both programs serve as market preparation, in order to make mobility and energy supply both efficient and low-emission in future. The focus of the support is on research and development activities, as well as demonstration projects. now-gmbh.de

For more information:

Manuel Fuchs
Press officer, TOTAL Deutschland GmbH
Tel: +49 30 2027-6223
Fax: +49 30 2027-6215
Mobile: +49 162 1333-557
E-Mail: manuel.fuchs@total.de