

Motorway Service Area of the Future

Initial Situation / Motivation

The Federal Government as the Road Construction and Maintenance Provider is responsible for an adequate service station system on German federal motorways. In the future, motorway service stations are supposed to be equipped with parking guidance systems, WLAN, charging, natural gas and hydrogen stations, state-of-the-art service areas for customers as well as innovative building technologies.

Measure Goal

As part of the Digital Motorway Test Bed, a first innovative fuelling and rest area was built at the Fürholzen rest area in the travelling direction of Munich. With the concept of the "Motorway Service Area of the Future", innovative elements are to be introduced at new and existing service stations prospectively.

Measure Implementation

The "Motorway Service Area of the Future" has been implemented with an energetically self-sustaining facility (in the sense of an Efficiency House Plus), innovative building technologies and resource saving operation (such as waterless toilets). The building was constructed using wood as a renewable raw material.

All available fuels on the market are offered to the customers: in addition to the existing fuels (super/diesel), also natural gas and hydrogen filling stations as well as covered electric fast-charging stations for passenger cars. In addition, AdBlue as well as ready

mixed windshield wiper water can be refilled via pump nozzles. The charging infrastructure and the service station itself are powered by renewable energy. Free WLAN and modern payment systems are also part of the contemporary digital offering implemented as part of the measures.



Source: Bavarian Street Information System (BAY-SIS)



Source: BAST

Current Status

Since the opening in September 2017, LPG, CNG, H2, electricity, super and diesel have been available as tank media at the facility. AdBlue is also provided for diesel vehicles. Natural Gas is supplied via a house connection with subsequent pressure boosting to 200 bar. In spring 2018, the electrolyzer for hydrogen production and two combined heat and

power plants were also commissioned. In addition, there are sales facilities for Toll Collect and the Austrian vignette. Furthermore, the plant has been integrated into the truck parking guidance system.

The evaluations of the first two years of operation with regard to the annual energy balance show that a surplus above the required quota was generated in each case.



Source: Bavarian Street Information System (BAY-SIS)

Location

Operating kilometre 510,3:
Fürholzen-West

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