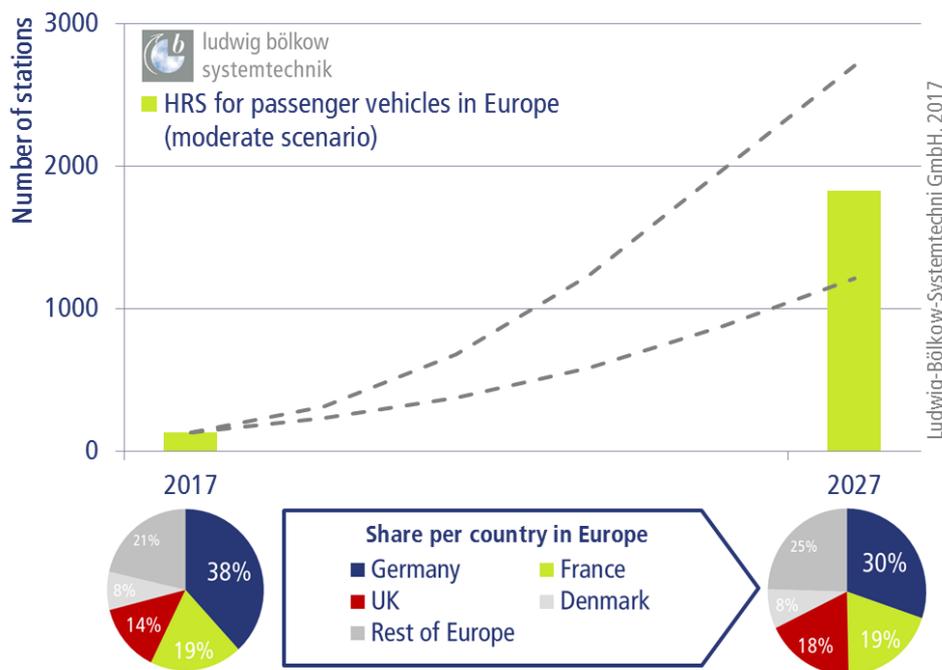


SHARP GROWTH OF HYDROGEN REFUELLING STATIONS NUMBERS IN EUROPE WITHIN THE NEXT 10 YEARS

Reports about the opening of hydrogen refuelling stations (HRS) go through the press at ever shorter intervals. Constantly, new and larger projects are being announced. Is this a trend?

Ludwig-Bölkow-Systemtechnik GmbH (LBST) regularly analyzes the expected growth in the area of hydrogen refuelling stations, among others for fuel cell passenger cars in Europe. Three different scenarios have been developed based on announcements and plans of European countries and hydrogen infrastructure stakeholders. Possible delays in construction are also taken into account.

Based on today's hydrogen refuelling station numbers, the moderate scenario shows a 14-fold increase in station numbers, by 2027. This corresponds to an average annual growth rate (CAGR) of about 30%. In the conservative scenario the number still increases by a factor of 9 (CAGR 25%) for the same period. The progressive scenario assumes that all current plans are implemented in time. For this case, the number of refuelling stations will increase by a factor of 20 (CAGR 35%).



There will be only a minor shift in terms of relevance of single countries in the next 10 years. The share of refuelling stations based in Germany will slightly decrease from 38% today to 30% in 2027. In return, Great Britain and other European countries will slightly gain relevance and will provide a larger share of the total hydrogen refuelling stations installed in Europe.

On international level, we expect that Europe will become significantly less important compared to the Asian market. This applies to both, systems for dispensing hydrogen to passenger cars as well as to system dispensing hydrogen to buses.



LUDWIG-BÖLKOW-SYSTEMTECHNIK GMBH

Ludwig-Bölkow-Systemtechnik GmbH (LBST) is an expert consultant for sustainable energy and mobility. With our expertise bridging technologies, markets, and policy we support international clients from industry, finance, politics, and non-governmental organisations in strategy, feasibility, and market assessments. International blue-chip companies trust in our reliable judgment.

Our cutting edge competence is based on over three decades of continuous experience, and on our interdisciplinary team of leading experts.

LBST supports its clients with

SYSTEM & TECHNOLOGY STUDIES	techno-economic assessment; due diligence; energy and infrastructure concepts; feasibility studies;
STRATEGY CONSULTING	product portfolio analysis, identifying new products and services; market analysis, decision support, and policy support;
SUSTAINABILITY CONSULTING	life cycle and carbon footprint analysis; natural resources assessment (energy, minerals, water); sustainability due diligence;
COORDINATION	project management, monitoring and assessment; and
CAPACITY BUILDING	studies, briefings, expert workshops, trainings.

Particular expertise exists in energy (renewables, energy storage, hydrogen and fuel cells) and mobility (fuels and drives, infrastructure, mobility concepts), with our work in sustainability cutting across all sectors.

A key common denominator of all activities is the rigorous system approach, making sure all relevant elements of a tightly networked system are taken into account, providing our customers with a comprehensive and complete basis for their decisions.

With our deep understanding of developments and technologies and our truly independent advice, we help our clients with sustainable decisions to secure their future.

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