



IPHE Country Update Nov 2024 – Jun 2025: Germany

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1. New Initiatives, Programs, and Policies on Hydrogen and Fuel Cells

In November 2024, the Federal Cabinet adopted the draft ordinance on statistical data collection for hydrogen ([EnStatWassV](#)). The ordinance requires large parts of the gas industry to annually report detailed data on the production and trade of hydrogen and its derivatives, such as ammonia and methanol, to statistical authorities. It also includes data collection on import and export volumes. In December 2024, the ordinance was [adopted](#) by the German Bundestag (i.e. the parliament).

Also in November 2024, the Federal Cabinet approved an amendment to the 38th Federal Immission Control Ordinance ([BImSchV](#)). Under the [revised regulation](#), the mineral oil industry may only count GHG reductions from renewable fuels (e.g. sustainable biofuels from waste and residues, renewable synthetic fuels, and hydrogen) and electricity that were achieved within the same calendar year to meet its quota obligations in 2025 and 2026. The option to carry forward surplus reductions from previous years has been suspended during this period.

In April 2025, the Federal Minister for Economic Affairs and Energy (BMWE) published a [White Paper on Hydrogen Storage](#), providing a basis for subsequent work on hydrogen storage under the incoming German government. The White Paper addresses the need for accelerated planning and approval procedures, a reliable market design as well as for subsidies to overcome the investment risks associated with the market ramp-up.



2. Hydrogen and Fuel Cell R&D Update

In November 2024, Daimler Truck received a total of 235 million euros (approx. USD 252.4 million) in public funding for its ["Pegasus" project](#) which aims to develop, produce, and test 100 heavy-duty trucks powered by liquid hydrogen. Of this sum, the German government contributes 158 euros million (approx. USD 169.7 million), while the states of [Baden-Württemberg](#) and Rhineland-Palatinate add 50 million euros (approx. USD 53.7 million) and 27 million euros (approx. USD 29.0 million), respectively. The project has been classified as an IPCEI by the European Commission.

In December 2024, the final report of the research project Hypat – [Global Hydrogen Potential Atlas](#) was published. The study provides a detailed analysis of hydrogen import challenges from both exporting and importing country perspectives. The interdisciplinary project was funded by the Federal Ministry of Research, Technology and Space (BMBF).

The energy service provider EWE [completed its HyCAVmobil research project](#) at its gas storage site in Rüdersdorf. As part of the hydrogen storage project, EWE and its partner the German Aerospace Center (DLR) were able to prove that it is possible to safely store hydrogen in an underground cavern storage facility. After five years of development work, the investment volume for the project amounted to more than 14 million euros (approx. USD 15 million) – almost eight million euros (approx. USD 8.6 million) of which were EWE's own funds. EWE and DLR received the remaining sum of around 6.5 million euros (approx. USD 7 million) as a grant from the Federal Ministry for Transport (BMV).

In February 2025, Bosch [announced](#) a strategic realignment of its hydrogen activities, discontinuing development of solid oxide fuel cell (SOFC) systems for decentralised energy supply. The company will instead focus on hydrogen



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production technologies and components for proton exchange membrane (PEM) electrolyzers.

Also in March 2025, the Fraunhofer Institute for Machine Tools and Forming Technology (IWU) [unveiled](#) hydrogen microgrids designed for autonomous energy supply. These container-based systems convert surplus electricity from renewables into hydrogen for storage, which can later be reconverted into electricity via fuel cells. The microgrids are intended for use in decentralised local electricity networks in Germany, South Africa, and Ukraine.

3. Demonstration, Deployments, and Workforce Developments Update

In October 2024, the HyPerformer project H2Rivers was successfully concluded. Together with the H2Rhein-Neckar project, H2Rivers built up a hydrogen ecosystem – including a largescale trailer filling centre, five refuelling stations and 62 fuel cell buses amongst other vehicles – in the Mannheim metropolitan area. The projects saw a total investment of 97 million euros (approx. 103.79 million USD) – 36.55 million euros (approx. 39.10 million USD) public funding – into hydrogen technologies.

With the publishing of the new guide [HyExperts – successfully developing regional hydrogen projects](#), National Organisation Hydrogen and Fuel Cell Technology (NOW) provides municipal authorities, companies and regions valuable support in developing a regional hydrogen economy on behalf of the BMV.

In late 2024, new hydrogen and fuel cell components of a mini-grid have begun operation on the Don Bosco Educational Campus in the Ghanaian port town of Tema. [The expansion of the grid is part of the GH2GH project funded](#) by the Federal Ministry for the Environment, Climate Action, Nature Conservation and Nuclear Safety (BMUV) through the Export Initiative



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Environmental Protection (EXI) funding programme. The project is funded with 1,3 million euros (approx. USD 1.39 million).

The 2024 follow-up report [Market development of climate-friendly technologies in heavy-duty road freight transport in Germany and Europe – 2024](#) provides information on the planned sales figures and the underlying strategic orientation of the most important commercial vehicle manufacturers in Germany and Europe. Following its publication in November 2024, the report is now also available in English.

In December 2024, the [BioH2Ref](#) project achieved a milestone by producing hydrogen with a purity of 99.999% from agricultural residues at a facility in Krefeld for the first time. The plant, which was commissioned at the end of 2022, was supported by the BMW until the end of 2024.

In January 2025, Deutsche Bahn [announced](#) plans to establish a hydrogen retrofit test centre at its Bremen depot in collaboration with the Fraunhofer IFAM research institute. The facility, where diesel engines and drive systems are already maintained, will demonstrate how existing diesel-powered trains can be converted to hydrogen propulsion.

In February 2025, Düsseldorf Airport and Greenlyte Carbon Technologies signed a [memorandum of understanding](#) to build a pilot plant for sustainable aviation fuel (SAF). The facility will integrate Direct Air Capture (DAC) technology with “green hydrogen” production to generate SAF on site (DAC-to-SAF). With an intended annual capacity of 250 tonnes of SAF, the project supports the airport’s “Master Plan 2045” and its goal of achieving climate neutrality by 2035.

During the course of February 2025, Bielefeld’s [public transport company moBiel put the first nine of a total of 25 new fuel cell buses into operation](#). The vehicles, which include eight 12-meter buses and seventeen 18-meter



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(articulated) eCitaro Fuelcell buses, can be powered by both hydrogen and electricity. They each have a range of over 400 kilometers. The project is funded by the BMV with a total of 8.7 million euros (approx. USD 9.3 million).

In February 2025, then-federal Chancellor Olaf Scholz, together with the management and shareholders of HY.City.Bremerhaven, [opened the first public hydrogen filling station in the so-called Climate City](#). The sustainable hydrogen project, opened to the public in March.

In March 2025, Deutsche Bahn AG signed a [cooperation](#) agreement with UK-based electrolyser manufacturer ITM Power. The partnership aims to explore hydrogen-powered solutions for transport and infrastructure, including trains, buses, and truck fleets.

Also in March 2025, the [HydroNet joint project](#) was officially launched in the Sauerland region. Led by Westnetz GmbH, the project aims to develop a regional hydrogen infrastructure that could serve as a model for the nationwide hydrogen ramp-up. It is the only project of its scale in Germany being implemented without EU funding, with a strong focus on engaging medium-sized industrial enterprises. The project includes the conversion of a former natural gas pipeline, installation of electrolyzers and storage systems, and connection lines to local businesses. Supported by €18 million from BMW, the consortium is investing a total of approximately €75 million. The project is scheduled to run until the end of 2029.

In April, the German Aerospace Center (DLR) [published a study](#) commissioned by Greenpeace on alternative marine fuels, with a particular focus on “green methanol”. The analysis highlights green methanol’s potential to reduce CO₂ emissions from the German shipping fleet by up to 96%. It outlines the necessary steps to scale up the use of green methanol and achieve a decarbonised maritime sector by 2050.



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In April 2025, EnBW [commissioned](#) Germany's first hydrogen-ready gas-fired combined heat and power (CHP) plant in Stuttgart-Münster. Equipped with two 62-MW hydrogen-compatible turbines supplied by Siemens Energy, the facility will initially run on natural gas and is expected to transition to 100% hydrogen operation by the mid-2030s. It is [has a capacity](#) of 124 MW of electricity and 370 MW of thermal energy to cover both baseload and peak demand.

Since April 2025, the National Centre for Charging Infrastructure at NOW [expanded its StandortTOOL by adding new features and data](#) – including the ability to display hydrogen refuelling station infrastructure.

The NOW together with the German Energy Agency (Deutsche Energie Agentur – dena), published a study on the future supply of Germany hydrogen refuelling station infrastructure via a hydrogen pipeline network last November. The analysis [Supply of H₂ Refuelling Infrastructure in Germany through a H₂ pipeline network](#) shows that a central hub model to supply hydrogen refuelling stations could be a cost-effective and sustainable solution.

4. Events and Solicitations

On 18 and 19 March 2025, the [Berlin Energy Transition Dialogue](#) (BETD) convened global ministers, policymakers, and stakeholders to advance the outcomes of COP28. The BETD featured numerous hydrogen-related sessions; the Pitch “Sustainability Governance in the Hydrogen Sector” (hosted by RIFS), a panel on “Green Hydrogen – Ramping Up Infrastructure,” and side events on “The Global Green Hydrogen Economy,” (hosted by Energy Systems of the Future (ESYS), World Energy Council), “Exploring Greece’s Role in the European Hydrogen Market,” (hosted by BMW, dena and the Greek Embassy) and “Green Hydrogen: Establishing the North West Corridor,” (hosted by the Scottish government).



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From 25 to 27 March 2025, the [final conference of the hydrogen lead project TransHyDE](#) took place in Berlin. The event presented project outcomes with a focus on systemic analyses, pipelines, and maritime imports.

5. Investments: Government and Collaborative Hydrogen and Fuel Cell Funding

In November 2024, BMW and BMBF issued a [new funding call](#) for international hydrogen projects. The second funding directive aims to foster international cooperation on hydrogen and its derivatives from renewable sources, while also supporting the development of import routes to Germany.

Also in November 2024, the German development bank KfW announced [a 24 billion euros loan](#) (approx. USD 25.776 billion) to finance the H₂ amortisation account - an essential mechanism for enabling the national hydrogen core network. While the network is to be financed through private investments, the amortisation account offsets the gap between initial infrastructure costs and early-phase revenue from network charges. In March 2025, KfW [disbursed the first 172 million euros \(approx. USD 184.7 million\) into the account](#), allowing 18 hydrogen core network operators to access their funding shares.

In December 2024, BMW [announced](#) the withdrawal of Germany's bids in the first auction round of the European Hydrogen Bank (EHB). Due to EU rules prohibiting double funding, German projects with buyers already receiving subsidies were excluded from participation. As a result, none of the German bids qualified. The government has committed to maintaining close dialogue with the European Commission to improve auction design.

Also in December 2024, the European Commission [approved](#) 350 million euros (approx. USD 375.9 million) in [state aid](#) for a German project to produce 30,000 tonnes of e-SAF annually. The company, Concrete Chemicals, plans to combine "green hydrogen" with captured CO₂ from a cement plant in



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Rüdersdorf, near Berlin. The resulting e-kerosene plant is expected to begin production in 2028.

In January 2025, the BMV [launched the third funding call to support airports in procuring mobile and stationary ground power systems](#) that use batteries or hydrogen to supply aircraft with electricity more efficiently and with zero emissions. A total of 3 million euros (approx. USD 3.2 million) in funding is available, with up to 70% of project costs covered.

Also in January 2025, Germany [committed](#) up to 588 million euros (approx. 632 million USD) for two hydrogen import tenders with Canada and Australia as part of the H2Global bilateral auction programme. Australia intends to co-finance a 400 million euros (approx. 430 million USD) auction and Canada a 200 million euros (approx. 215 million USD) auction.

In February 2025, Hintco [launched](#) the second H2Global auction round. The supply-side tender includes five lots - four regional and one global - with a minimum allocation of 484 million euros (approx. 520 million USD) per regional lot and 567 million euros (approx. 609 million USD) per global lot. The tender targets renewable fuels of non-biological origin (RFNBOs) and features both product-and vector-open lots. The global lot is jointly funded by Germany and the Netherlands.

In March 2025, the BMW Group published a second funding call under the Industrial Decarbonisation and Climate Protection Programme (BIK). Until the mid of May 2025, companies can submit project outlines. The programme offers grants of up to 200 million euros (approx. 215 million USD) per project, with an overall budget of approximately 3.3 billion euros (approx. 3.54 billion USD) available for the [programme's](#) full duration.



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Also in March 2025, the European Commission [approved](#) 5 billion euros (approx. 5.4 billion USD) in state aid for the second round of Germany's climate protection contracts (KSV).

The EXI funding programme of the BMUV [launched four further environmental protection projects with “green hydrogen” and fuel cell technologies](#) in Chile, Jordan, New Zealand (Cook Islands) and Thailand. The BMUV funds these four projects with 1,8 million EUR (approx. (1.9 million USD)

The BMV pledged support of up to 290 million euros (approx. USD 330 million) for the development of decentralised hydrogen innovation and technology centres (ITZ-H2). The first two sites, the northern German cluster Bremen, Bremerhaven, Stade and Hamburg, and the site in Chemnitz [have been awarded funding of a combined 154 million euros \(approx. USD 165.3 million\) in March](#). The other two sites in Duisburg and Bavaria are still in the application phase. The centres are designed to provide specialised testing infrastructure, development environments and support companies in the area of Regulations, Codes & Standards with a special focus on SMEs.

6. Regulations, Codes & Standards, and Safety Update

In November 2024, the inaugural meeting of the [RCS Hydrogen Platform](#) took place in Bonn. RCS stands for Regulation, Codes, and Standards. The platform is intended to foster strategic coordination between hydrogen standardisation efforts and legislative frameworks. Members include major German institutions such as DIN, DKE, DVGW, VDI, BMW, BMV, BMBF, BMUV, PTB, BAM, NOW, dena as well as industry associations and private sector stakeholders.

In December 2024, three certification systems (CertifHy, ISCC EU, REDCertEU) were officially recognised by the European Commission to issue RFNBO certification. At the beginning of 2025, the Federal Environment



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Agency in Germany (Umweltbundesamt, UBA) recognised the certification of RFNBOs in accordance with the systems approved by the EU Commission. Potential certification bodies must be authorised by UBA in Germany. In March 2025, [TÜV SÜD](#) was the first certification body to be authorised by UBA. As such, TÜV SÜD is able to certify hydrogen and its derivatives according to the requirements of the voluntary certification systems CertifHy EU, ISCC EU and REDcert EU.

In March 2025, TÜV Rheinland and TÜV SÜD were among the three certification bodies [selected](#) as auditors for the voluntary EU certification scheme CertifHy EU RFNBO. The scheme aims to verify the sustainability and origin of renewable fuels of non-biological origin (RFNBOs) across Europe.

Since March 2025 it is possible for HRS in Germany to receive indirect OPEX-“funding” by participating in GHG-quota-trading with mineral oil companies via certificates. This allow HRS to generate between 3-5 €/kgH₂ (3.2–5.4 USD/kgH₂) of additional income, which is equivalent to around 20 – 30 % of the price at the gas station.

In March 2025, NOW conducted a workshop on approvals and safety regulation for HRS, to streamline the approval process in the administrations and speed up a safe infrastructure ramp-up. Participants consisted of HRS operators, manufacturers, and federal ministries (e.g. BMV). Possible regulatory measures as an outcome are still being evaluated.

In April 2025, Air Liquide [announced](#) that its Trailblazer project in Oberhausen has become the first “green hydrogen” production facility in Germany to [receive](#) RFNBO certification under the ISCC EU scheme.