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IMPORT STRATEGY FOR HYDROGEN AND HYDROGEN DERIVATIVES ADOPTED

On 24 July 2024, the Federal Cabinet adopted the Import Strategy for hydrogen and hydrogen derivatives. The Import Strategy makes an important contribution to increasing **investment security** for hydrogen projects and thus to procuring a **reliable supply** of hydrogen for use as a raw material and energy source.

Strategy adoption sends important signal for partner countries and international hydrogen market development

The **key messages** of the Strategy are as follows:

The German government intends to **build and expand hydrogen partnerships** to meet its import needs for hydrogen and its derivatives.

The German government will also include **low-carbon hydrogen and its derivatives** to meet demand. However, the long-term goal is a supply of green hydrogen and derivatives produced using renewable resources.

The German government supports a **diversified product range** for the import of hydrogen. In addition to molecular (i.e. gaseous or liquid) hydrogen, various hydrogen derivatives (e.g. ammonia, methanol, naphtha, electricity-based fuels) and carriers such as liquid-organic hydrogen carrier (LOHC) can be considered.

The German government is pursuing the **parallel development of import infrastructures** for pipeline and

ship-based transportation. While a large part of the import demand is expected to be met by pipeline, ship-based imports will also be useful in the long term, especially to meet the demand for hydrogen derivatives.

The German government is working with a **large number of partner countries** and regions, both within Europe and internationally, to expand its climate and energy partnerships. The aim is to diversify sources of supply as widely as possible.

Germany to become one of the largest hydrogen importers in the world

The German government forecasts that national **demand for hydrogen and its derivatives will be 95 to 130 TWh in 2030**, of which around **50 to 70%** will have to be imported from abroad. In an interim report on the system development strategy, the Federal Ministry for Economic Affairs and Climate Action (BMWK) further estimates that the import share will continue to rise after 2030 and that demand will increase to 360 to 500 TWh of hydrogen and to around 200 TWh of synthetic hydrocarbons and other hydrogen derivatives by 2045. In the long term, Germany will therefore become the **largest demand market and importer of hydrogen and its derivatives in Europe**, and possibly also worldwide.

Five offtake sectors drive the demand for hydrogen and its derivatives in Germany:

The steel industry needs molecular hydrogen in order to replace coking coal-based blast furnaces with hydrogen-based direct reduction plants.

The basic and petrochemical industries need molecular hydrogen, naphtha, methanol and ammonia to replace fossil hydrogen as a raw material for various chemical processes.

Shipping has a need for green ammonia, methanol and liquid hydrogen to replace fossil crude oil with electricity-based fuels. Depending on the electricity-based fuel, other propulsions may also be necessary.

Aviation has a need for E-kerosene, as fossil kerosene must be replaced by sustainable aviation fuels.

Electricity has a need for molecular hydrogen, as H₂-ready gas-fired power plants and H₂-only power plants must first be established in the electricity system before they can assume a balancing function on a seasonal basis.

Import Strategy supported via a mix of measures along the entire supply chain

Strengthening demand: Strengthening a reliable demand for hydrogen in Germany improves supply-side conditions and facilitates production and investment decisions. The instruments that will enable this include Carbon Contracts for Difference (CCfDs), the Federal Fund for Industry and Climate Action (BIK), the IPCEI Hydrogen, the Power Plant Safety Act and the quotas defined in RED III.

Transport infrastructure: The import of hydrogen and its derivatives is made possible by the construction of pipelines (for imports from Europe and neighbouring countries) and terminals (for imports from more distant regions by ship). The hydrogen core network, which will gradually come into operation by 2032, will be closely linked to a trans-European hydrogen network and to ports. This core network will make it possible to transport the imported hydrogen throughout Germany.

Certification and standards: EU certification and product requirements apply to imports to Germany. In addition, the German government is internationally commit-

ted to ambitious, practicable and, where possible, harmonised sustainability standards to ensure that the ramp-up of the international hydrogen market does not have a negative impact on the global energy transition or the sustainable development of partner countries.

Promotion of supply: In addition to H2Global as a central funding instrument, the German government supports international hydrogen production through the further development of the European Hydrogen Bank, the establishment of the PtX Development Fund and through the provision of foreign trade promotion instruments (e.g. export credit guarantees, investment guarantees or untied financial loans).

International cooperation: The international market ramp-up and the establishment of hydrogen import routes are supported by various international and intra-European cooperation efforts (e.g. climate and energy partnerships, sustainable energy transition partnerships, H₂-agreements, import corridor dialogues) and over 40 partnerships.

Targeted research and development measures also contribute to the international market ramp-up.

Implications of the Strategy

The Import Strategy provides a framework for hydrogen cooperation and private-sector hydrogen imports to Germany. It is an integral part of the updated National Hydrogen Strategy and is therefore also subject to the regular monitoring undertaken for the National Hydrogen Strategy.

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