

# German call for proposals for joint international research on green hydrogen technology

The German Federal Ministry for Economic Affairs (BMWi) and Energy and the Federal Ministry of Education and Research (BMBF) have presented a [funding guideline](#) [in German] for the provision of financial support to international hydrogen projects.

This presents an **opportunity for New Zealand** businesses and research institutions.

Within the framework of the guideline, the BMWi and BMBF seek to **promote international cooperation in the field of green hydrogen** and the derivatives produced from it, as well as storage, transport and integrated application technologies.

The goal of the funding is to **promote the use of German technology abroad**, to contribute to timely and targeted efforts to set up a global market for green hydrogen, and to prepare structures for the import of hydrogen into Germany.

The partners are to be countries outside the European Union and the EFTA states.

Funding takes place in two modules:

## **Module I** (funded by the BMWi)

International projects in the field of industrial application and experimental development, i.e. pilot projects.

## **Module II** (funded by the BMBF)

Accompanying international basic and industrial research projects, scientific studies and training measures.

## What are the main objectives of the funding?

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- (1) Near-term and targeted establishment of a global market for Green Hydrogen to achieve a rapid decrease in the levelized cost of H<sub>2</sub> production through economies of scale and through innovation;
- (2) Support for the use and application of hydrogen technologies by German-based businesses along the entire hydrogen value chain;
- (3) Preparation of an import infrastructure into Germany (but import to Germany is not required);
- (4) Building capacity for the entire hydrogen value chain as well as for the academic and professional training and education, to maximise potential growth and create enduring cooperative programmes.

## What is supported?

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**Module I** funding is intended to support the **establishment of industrial production units, pilot facilities and demonstration projects**, and support associated research activities and analysis required to prepare plan, and implement these facilities. Projects addressing the following topics are included [additional detail in German original]:

- **production of green hydrogen** (e.g. via electrolyzers) and development and near-market testing (TRL 7-8) of advanced production methods
- **production of hydrogen derivatives**, e.g., synthesis of ammonia and synthetic kerosene, with the goal to make derivative production technology available to end users
- **hydrogen storage**, including infrastructure, installation of tanks, processing facilities, including auxiliary components (e.g., pressurised/cryogenic storage, absorption, metal hydrides, chemical storage)
- **hydrogen transport** infrastructure outside of networks, e.g., safe loading and unloading, distribution to end users;
- **application of hydrogen to hard-to-decarbonise sectors** and processes, e.g., fuel cell electric vehicles, ammonia for ships, synthetic kerosene in aviation, synthesis of steel and industrial chemicals;
- **integrated projects** that include multiple elements (e.g., generation + derivatives + transport);

**Module II** funding focuses on associated/accompanying research activities, i.e. carrying out **fundamental academic and industrial research**. The projects should have a clear practical relevance insofar as the knowledge generated contributes to the further development of the national and international hydrogen economy, especially as regards areas and technologies listed under Module I.

This includes research into innovative methodologies for generation, storage, transport and utilisation of hydrogen, as well as research into hydrogen ecosystems including simulations, techno-economic analysis, feasibility studies; examples include

- development of innovative production methods, e.g. from seawater;
- novel methods for synthesis of derivative fuels;
- process studies, techno-economic analyses, and
- support for building capacities for academic and professional training in the partner country.

## Who can apply?

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The call is open to legal entities, such as businesses, universities and research institutes. For Module II, research consortia consisting of various research (international) institutes and universities, or collaborations of businesses with research institutions are eligible. Further criteria are:

- Applicants (at least one project partner) must be headquartered in the EU and have a permanent representation or subsidiary in Germany at the time the funding is disbursed.
- Only projects that have not yet started at the time of approval are eligible for funding.

- Applicants must demonstrate that the project would not be economically viable without funding.
- The investments funded under Module I must be operated for at least three years after commissioning (first intended use of a technology) in accordance with their purpose [some exemptions from this requirement apply].

## How much funding is available?

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Project funding is provided through federal grants in the form of partial financing or, in designated cases, full financing (Module 2 only). These are **non-repayable grants**. Specific funding criteria apply in each module:

**Module I:** maximum funding amount is **€15 million per project** and per applicant.

Depending on the specific circumstances, funding can be granted for **25-45% of eligible project costs**. This includes personnel costs, equipment, consumables, third-party research, buildings and land, insofar they directly contribute to project aims.

The total volume of the funding guideline is set at **€150 million per year**. Overall €350 million has been earmarked for the funding to be granted under Module I. The projects funded must be implemented by the end of 2024.

**Module II:** maximum funding amount is **€5 million per project** and per applicant.

The funding available under Module II depends on the type of project and research as well as the universities/businesses involved. In general, Module II funding could cover

- 100% of eligible costs for fundamental research,
- 50% of the eligible costs for industrial research;
- 50% of the eligible costs for feasibility studies.

Under certain conditions, funding for industrial research conducted by start-ups and SMEs as well as businesses collaborating with research institutions can rise to up to 80% of the eligible costs.

## How to apply?

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The application process is run in two consecutive stages: Applicants are required to submit a first project outline by 31 Oct 2021 (first funding round, other upcoming deadlines: 31 Dec 2021 and 28 Feb 2022). The outline can be submitted via email (Module I) or this [portal](#), and should not exceed 30 pages for Module I, or 12 pages for Module II.

Successful applicants will then be invited to submit a full project proposal.

Further instructions and a (German) template for Module II applications can be found [here](#).