

PRESS RELEASE

October 12, 2026

HySecunda Showcases Results for the Hydrogen Economy of Tomorrow

At Hydrogen Technology World Expo 2026 in Hamburg, the Fraunhofer accompanying research project HySecunda will present key results from several years of research and development aimed at building a high-performing, safe, and competitive hydrogen economy. From October 20 to 22, 2026, the event will highlight the work of nine Fraunhofer Institutes, which are collaborating with partners from industry, research, and education through the end of 2026 to develop practical solutions along the value chain for green hydrogen and its derivatives. A particular focus is on South Africa and the SADC region. In Hamburg, visitors will be able to see what this collaboration has achieved.

Hands-on technologies: At the HySecunda booth E39 in hall B7, researchers will present demonstrators and exhibits from a range of technology fields:

- barrier coatings for pipes and tanks designed to make transport and storage components more durable and reliable,
- H₂ detectors for detecting hydrogen and locating potential leaks,
- physical sensors for monitoring the condition and integrity of components and structures,
- novel bipolar plates for electrolyzers, with a focus on performance, service life, and cost.

HySecunda thus presents tangible approaches to key challenges facing the hydrogen economy: improving safety, extending service life, reducing costs, and increasing the robustness of the technologies.

Technologies and expertise for the hydrogen economy

However, the trade show presentation goes beyond individual technical developments. HySecunda combines technology development with research on sustainability, certification, and market ramp-up, as well as capacity building.

The project investigates how sustainability regulations and certification requirements affect the technical configuration, economic viability, and greenhouse gas emissions of Power-to-X projects, as well as the costs and challenges associated with exporting PtX products from the SADC region.

These assessments compare regulatory frameworks and market incentives across key international markets, including the EU (RED III), the UK, Japan, South Korea, and the

US. By linking techno-economic assessments with sustainability criteria, HySecunda helps identify practical pathways for bringing green hydrogen and PtX products to market.

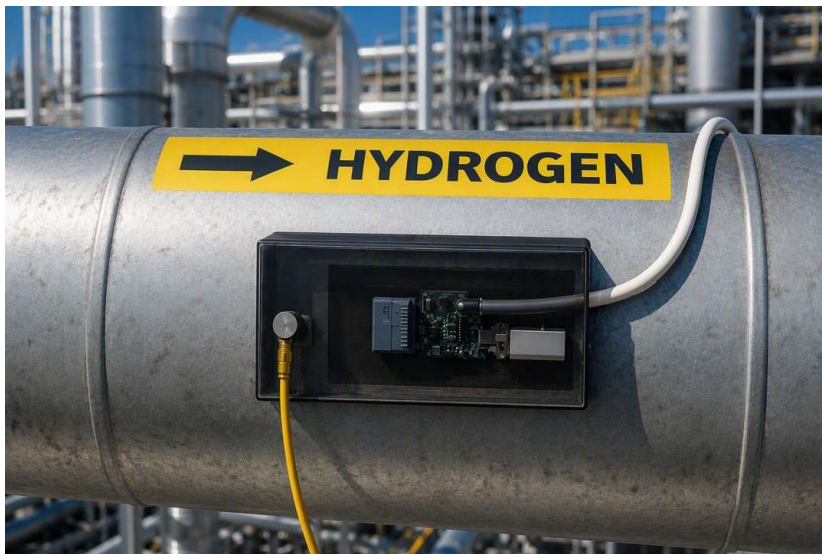
Establishing a sustainable hydrogen economy requires not only new technologies but also skilled professionals and reliable framework conditions. Another priority is therefore the development of education and training programs for local professionals. Together with partners in South Africa and the SADC region, the project is developing concepts that support the long-term development of expertise for planning, operating, and advancing a green hydrogen economy.

The HySecunda consortium includes the Fraunhofer Institutes for Microstructure of Materials and Systems IMWS (project coordination), Energy Economics and Energy System Technology IEE, Energy Infrastructures and Geothermal Systems IEG, Ceramic Technologies and Systems IKTS, Silicate Research ISC, Surface Engineering and Thin Films IST, Wind Energy Systems IWES, Systems and Innovation Research ISI, Solar Energy Systems ISE, and the Fraunhofer Academy. The research project is funded under grant number 03SF0734 as part of the 7th Energy Research Program of the German Federal Ministry of Research, Technology and Space.

HySecunda @ Hydrogen Technologies World Expo

October 20–22, 2026 | Hamburg | Hall B7 | Booth E39

More information: www.hysecunda.fraunhofer.de



Caption: The HySecunda project aims to identify optimized solutions for the production, storage, and certification of green hydrogen. © **AI-generated**



The Fraunhofer accompanying research project HySecunda: scalable solutions for green hydrogen production in South Africa © **Fraunhofer**



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