The Greater Region in the European spotlight – Success stories on Hydrogen, industrial transformation and real cross-border cooperation

H2IRL & CHP Hydrogen Summit 2026

November 18th-19th 2026, Cork

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SAARLÄNDISCHE WASSERSTOFFAGENTUR GMBH

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November 19th, 2026

www.h2-saarland.de

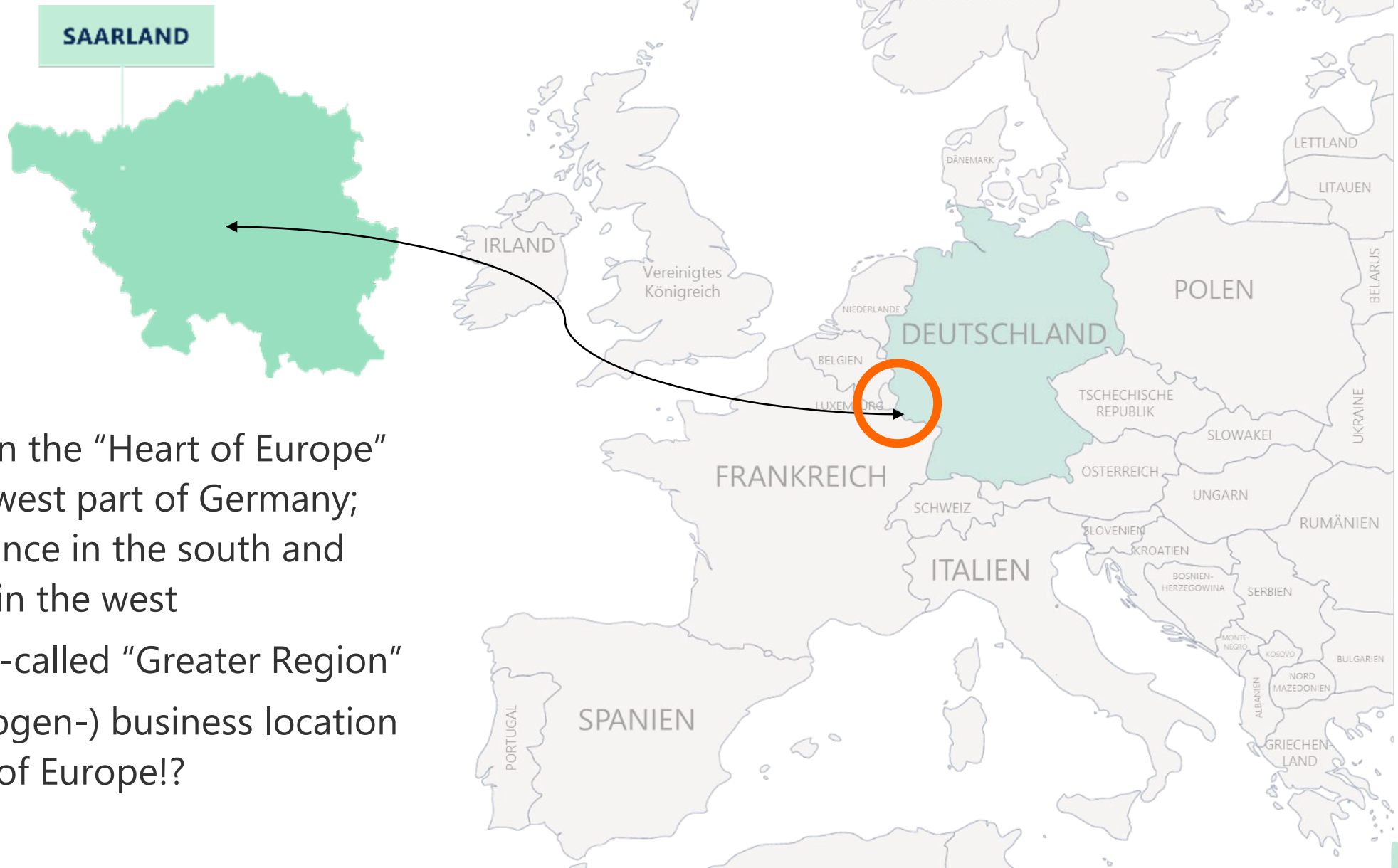
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Germany's Saarland



- Located within the "Heart of Europe" in the south-west part of Germany; bordering France in the south and Luxembourg in the west
- Part of the so-called "Greater Region"
- Perfect (hydrogen-) business location in the centre of Europe!?

invest trade service
Germany's SAARLAND

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The four Activity Fields of the Hydrogen Economy

PROJEKT CarlHYng

mosaHYc

Power4Steel

IZES
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Action Field 1 Supply

- Production
- Procurement/ Imports
- Green Energy
- Local resources

Action Field 2 Infrastructure

- Gas Pipelines
- Transport Logistics
- Storage
- Refuelling Stations

Action Field 3 Usage

- Industry
- Energy generation
- Mobility
- Sector Coupling

Action Field 4 Suppliers & Services

- Research & Development, Engineering Services,
- Training & further education programmes
- Various components such as ball & spindle valves, filters, tanks

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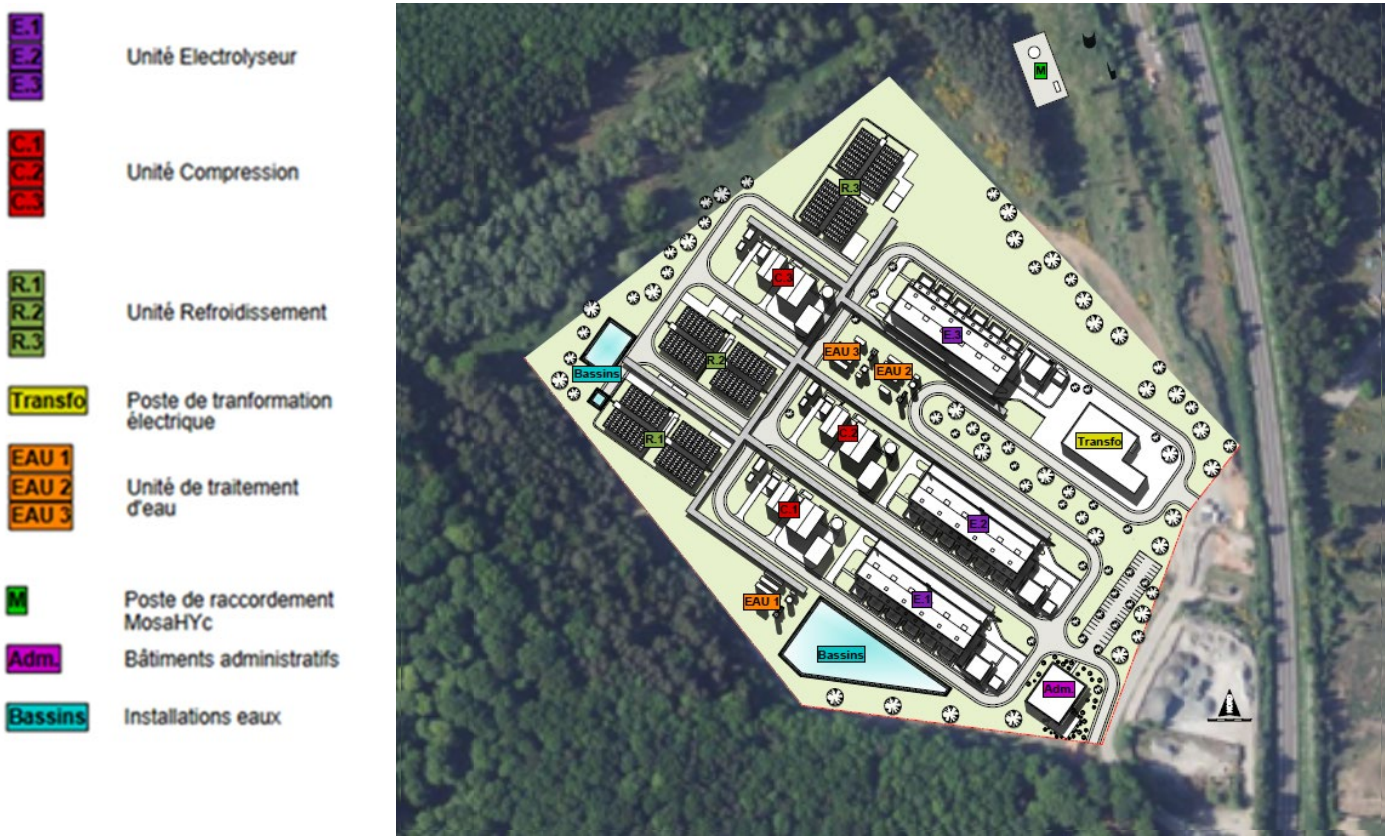
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Action Field 1: Green H_2 Production – PROJEKT CarlHYng

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The green hydrogen production project CarlHYng will be built **in three phases**. It is located in France near the village of Carling and near the existing Chemical platform CHEMISIS.
The production side will be connected to the so-called "mosaHYc" pipeline **(→ Action Field 2)**



CarlHYng facts

- Planned electrolysis power in the first phase in 2029: ~ 70 MW
- Planned production capacity in Phase 1 of at least 6,000 t/a of RFNBO certificated hydrogen
- Planned increase of electrolysis power to 300 MW in three phases
- Operator: Verso Energy
- total investment of more than 100 million euros for Phase 1

Bildquelle: Projet CarlHYng, Dossier de la concertation préalable 23 octobre 2023 au 18 décembre 2023

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Action Field 2: Ground-breaking ceremony for the mosaHYc hydrogen pipeline

mosaHYc facts

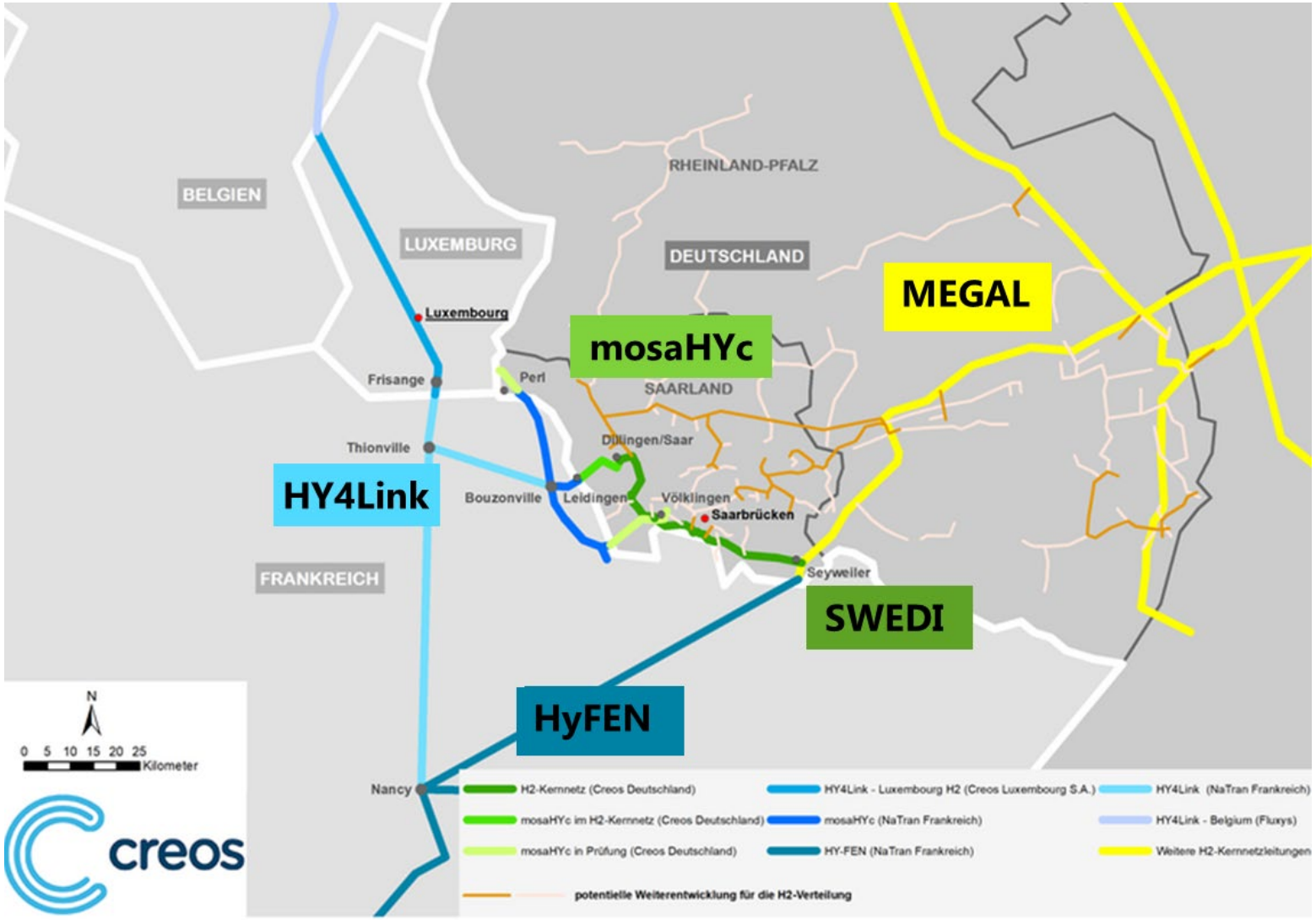
- The ground-breaking ceremony took place on August 28th, 2026
- According to the current project plan, the construction period will be less than two years
- The mosaHYc hydrogen pipeline has a length of approx. 100 km and connects France and Germany across the border
- 70 km are existing and 30 km are new-to-be-built



Source: https://meco.gouvernement.lu/de/actualites.gouvernement2024%2Bfr%2Bactualites%2Btoutes_actualites%2Bcommuniques%2B2026%2B08-aout%2B28-delles-mosahyc.html, abgerufen am 17. September 2026

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Integration of the mosaHYc pipeline into the Greater Region



- The mosaHYc pipeline is expected to come into operation at the end of 2028
- mosaHYc connects the Greater Region to the main transport pipelines MEGAL (north-east), HyFEN (south) and HY4Link (west)
- It is part of the German core network and the European Hydrogen Backbone
- It is the first cross-border hydrogen pipeline in Europe

Source: https://www.creos-net.de/wasserstoff/netzinformationen/wasserstoff-in-unserer-kernregion; abgerufen am 17. September 2026

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Action Field 3: Key Facts about the usage of H_2 in the Steel Industry or why is H_2 so important for the Power4Steel project !?

- CO_2 reduction potential through the use of hydrogen
  - Compared with the conventional blast furnace/converter process, the reduction potential when using 100% green hydrogen is around **90-95% (2.0 t / 0.2-0.1 t)**
- Hydrogen requirement for the production of one tonne of steel
  - Around **50–60 kg of hydrogen** is required to produce one tonne of direct reduced iron (DRI). For the steel works in Dillingen, with a planned production of around two million tonnes of DRI per year, this corresponds to a requirement of approximately **100,000 to 120,000 tonnes** of hydrogen annually
- Hydrogen supply via pipeline is essential for the steel industry
  - In Germany the **steel industry will be the first major anchor customer for green hydrogen.** Gas grids like the German core network as well as the European Hydrogen Backbone were needed, because the enormous demand cannot be delivered by lorry or rail

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Action Field 3: Stahl Holding Saar “Power4Steel”

	Phase 1 2029 ff.	Further Development
Goal	Establishment of a local hydrogen economy in Saarland and securing a connection to the German core network and the European Hydrogen Backbone	Europe-wide procurement of the most competitive hydrogen volumes
H_2-Demand	6 kt	~120 kt
Status	**transport grid**	**H_2-procurement**	**transport grid**	**H_2-procurement**
	Construction of mosaHYc pipeline contractually agreed with network operators until 2029, start of construction in August 2026	**Delivery of 6,000 tonnes RFNBO certificated H_2 per anno** contract signed in Sep. 2025 with Verso Energy; first delivery in 2029	**Connection of Dillinger steel works** to the German H2 core network (according to plan, implementation agreed with BMWE by 2032)	Initial **discussions with potential suppliers** regarding a Europe-wide tender have already begun.

Quelle: SHS – Stahl-Holding –Saar Stand August 2025

Action Field 3: “Power4Steel” – Construction Progress



- left: slag processing hall
- right: electrical supply for the new facilities
- image 1: 2Q2023
  images 2 - 5:
  3Q2025 – 1Q2026
  (the dates these photos were taken is unknown)
- the construction site covers an area of approximately 800m x 400m → 320.000 m^2
  (that is roughly equivalent to 40 football pitches)

Bildquellen: Bild 1 https://www.saarbruecker-zeitung.de/saarland/saarlouis/dillingen/dillinger-huette-grosser-umbau-auf-gelaende-das-macht-sorgen_aid-92196891 vom 14.06.2023, abgerufen 11.08.2026, Bild 2 https://www.faz.net/aktuell/wirtschaft/unternehmen/gruener-umbau-der-stahl-industrie-das-saarland-macht-vor-wie-es-geht-110539929.html; Bild 3 https://www.saarbruecker-zeitung.de/saarland/saarlouis/dillingen/dillinger-huette-das-schlimmste-waere-wenn-china-2027-mit-gruenem-stahl-starten-wuerde-v10_aid-132821397; Bild 4 https://www.pure-steel.com/power4steel/, abgerufen am 16.04.2026; Bild 5: https://www.saarbruecker-zeitung.de/saarland/saar-wirtschaft/kommentar-transformation-der-stahlindustrie-im-saarland-bleibt-riskant_aid-151496273 vom 17.07.2026, abgerufen 11.08.2026

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Action Field 4: Hydrogen Refuelling Station on side the Saarbahn GmbH Headquarter in Saarbrücken

- Start of operation of the Hydrogen Refuelling Station was April 20th, 2026.
- The control board of the refuelling station is equipped with products of MHA Zentgraf, a Saarland based component supplier!







Source: private Aufnahmen Bodo Groß, aufgenommen am 20. April 2026

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Action Field 4: Hydrogen Storage Options
Hans Leffer GmbH & Co. KG, Saarbrücken



- Operating pressure: 50 bar
- Internal diameter: 3,200 mm
- Overall length: 23,800 mm
- Wall thickness: 38 mm
- Volume: ~184 m^3
- Weight: 79.2 tonnes
- Storage capacity per tank: ~750 kg H_2

Source: Stahl- und Apparatebau Hans Leffer GmbH & Co. KG, persönliche Mitteilung Dr. Andreas Leffer; E-Mail vom 30. Oktober 2026

Action Field 4: Hydrogen Components / Companies and R&D made in Germany's Saarland

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ceranovis

GFS Fuel Cells

Kolping Bildung | Deutschland

BRÜCK

IZES
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HYDAC



moehwald



LEFFER

DILEB



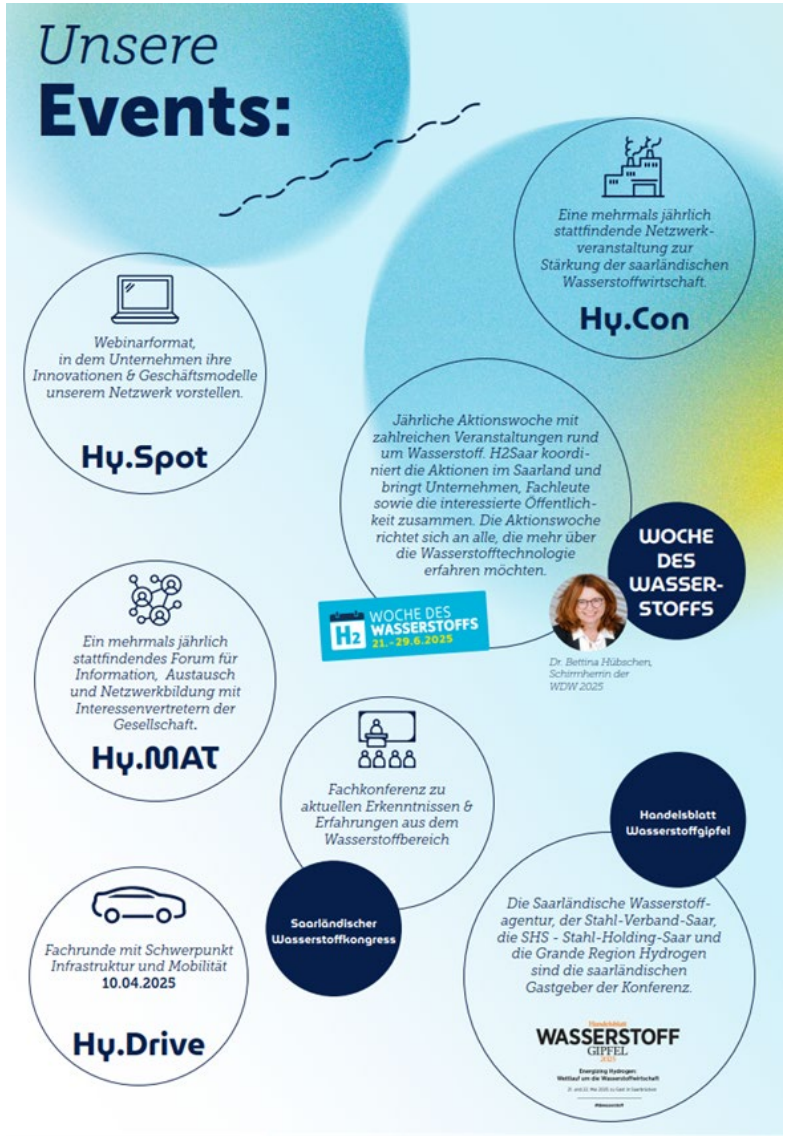
Source: Stahl- und Apparatebau Hans Leffer GmbH & Co. KG, persönliche Mitteilung Dr. Andreas Leffer; E-Mail vom 16. Mai 2025

se schütz engineering

PUREM
by Eberspächer

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Upcoming Events organised by H2Saar



1. 3rd Saarland Hydrogen Congress:

- Under the key topic **'The Price of Independence: What industrial independence costs – and who pays for it'**, the 3rd Saarland Hydrogen Congress will take place January 19th and 20th 2027 at the VHS Zentrum Saarbrücken.

2. 2nd Hydrogen Summer School:

- When? → Scheduled for August 16th – 20th 2027
- Where? → Saarland University Sports Campus, Saarbrücken
- Who? → Undergraduates, PhD students, postdoctoral researchers as well as anyone interested H_2 technologies
- What? → Lectures, excursions, interactive workshops, evening programme and "meet new people"

3. Interested?

- **→ Please send an Email to b.gross@h2-saarland.de**

Soiurce: Saarländische Wasserstoffagentur GmbH

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Are we on the right way?

- A hydrogen pipeline network such as Germany's core network or other national networks – as parts of the European Hydrogen Backbone - is essential for the ramping up of the hydrogen economy → in Germany the steel industry is the most important anchor customer or initial off-taker of huge hydrogen amounts
- Crucial for the success of a hydrogen (or any other) project is that all partners involved work closely together → the so-called chicken-and-egg problem must be addressed as a top priority right from the start
- The public must be involved at a very early stage → talk to the public before digging to avoid citizens' initiatives opposing your project

My personal opinion: Yes, we are, but there's still a lot to do!



Questions?

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21. April 2026
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