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

Tartu Hydrogen Days 2026

October 8th-9th 2026, Tartu

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SAARLÄNDISCHE WASSERSTOFFAGENTUR GMBH

Dr Bodo Groß

b.gross@h2-saarland.de

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www.h2-saarland.de

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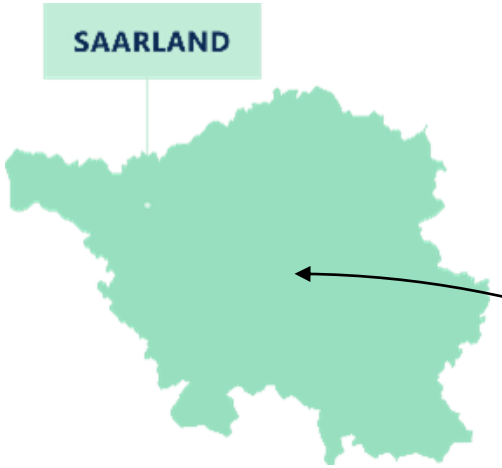
Germany's Saarland



Germany's Saarland – Within the Heart of Europe

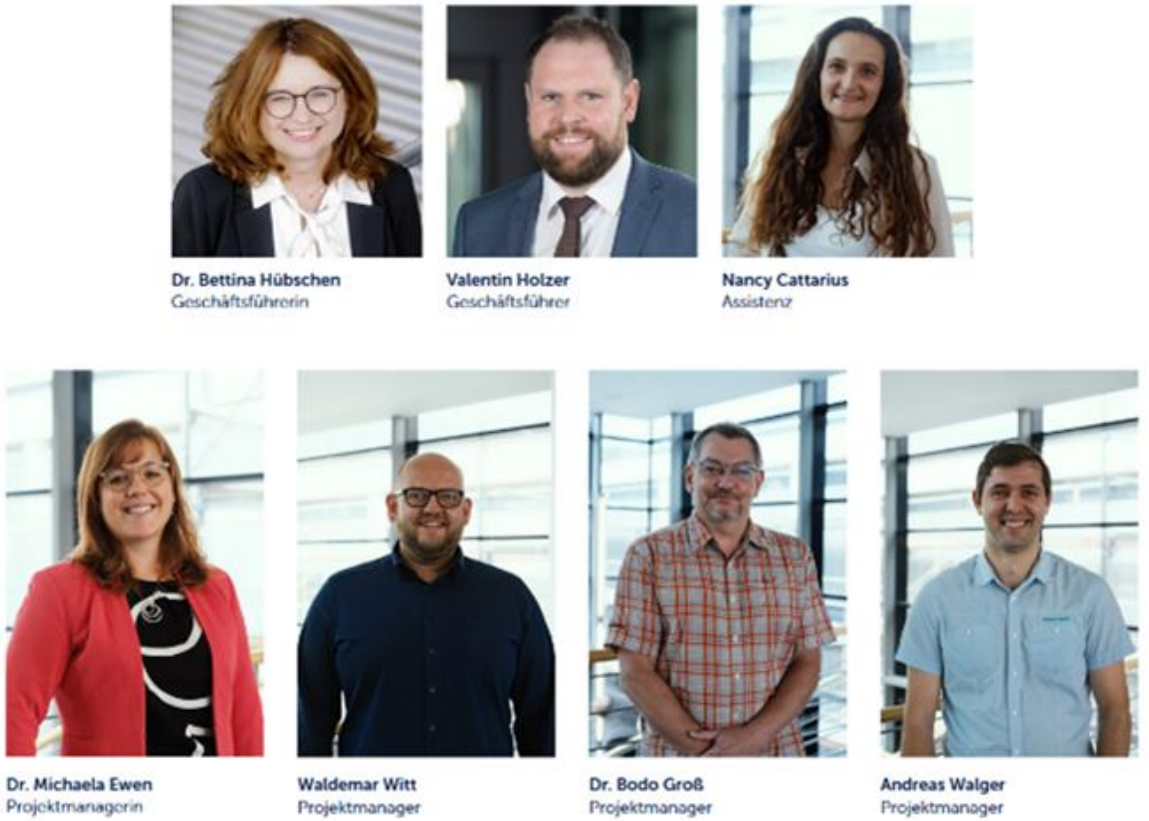
- Located in the south-west part of Germany
- Part of the so-called "Greater Region", bordering France in the south and Luxembourg in the west
- Perfect (hydrogen-) business location in the centre of Europe!?

invest trade service
Germany's SAARLAND

H2Saar – Who we are!

The Saarland Hydrogen Agency GmbH – H2Saar

- founded in May 2023 as a 100% subsidiary of the German Federal state Saarland
- Location: Saarbrücken
- We are a small team of 5 project managers, 1 assistant, 2 managing directors and are occasionally supported by master students



The four Activity Fields of the Hydrogen Economy

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PROJEKT CarlHYng

mosaHYc

Power4Steel

IZES
Institut für ZukunftsEnergie- und Stoffstromsysteme

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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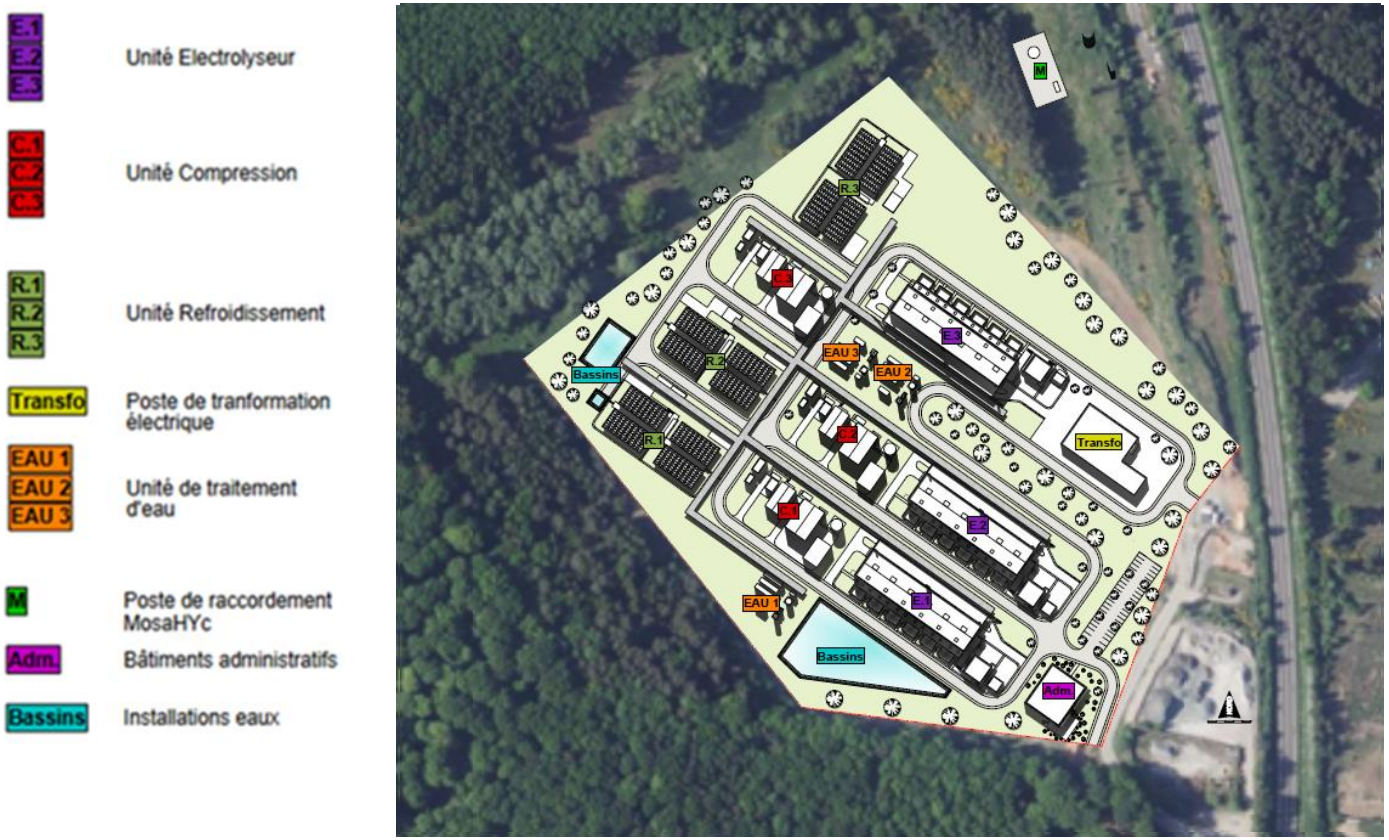
Action Field 1: Green H_2 Production –

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

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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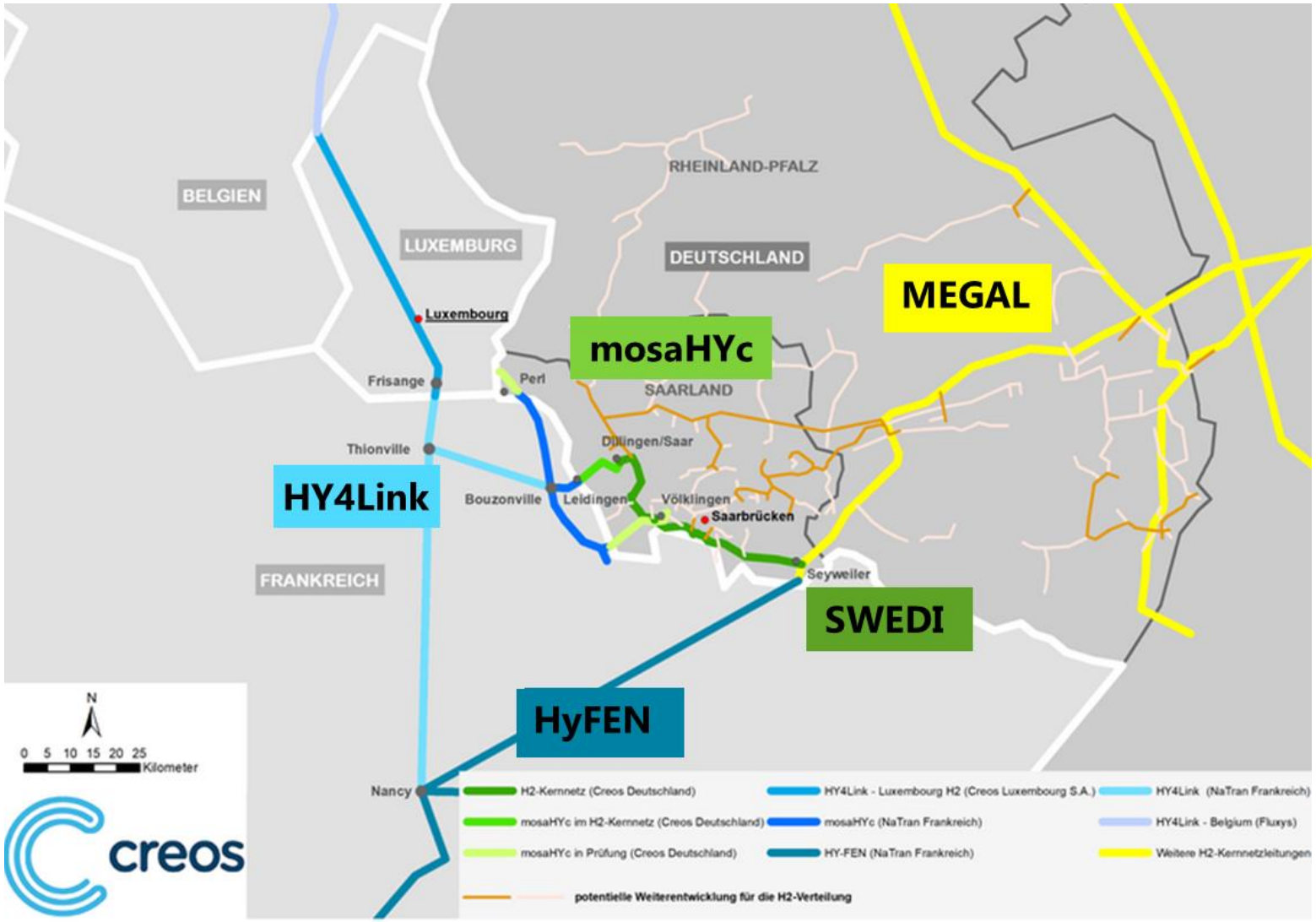
Integration of the mosaHYc pipeline into the Greater Region



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

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

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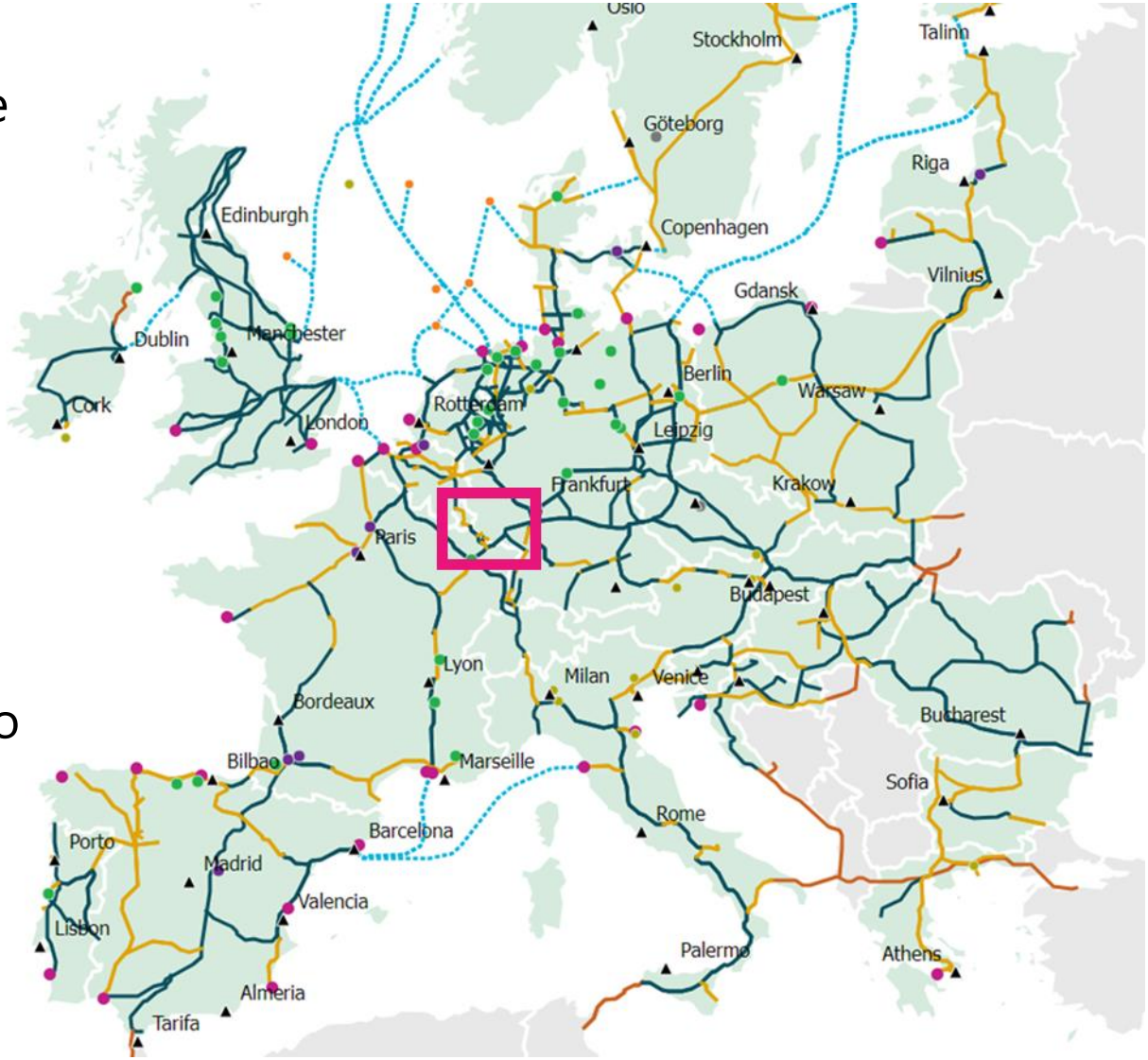
Strategic position of the mosaHYc pipeline within the context of the European Hydrogen Backbone in 2040

By 2040, the mosaHYc pipeline should be fully integrated into the European Hydrogen Backbone (EHB). This will result in the following connection points for the Greater Region to the EHB:

- HY4Link: A connection to the North Sea via France, Luxembourg, Belgium and the Netherlands, linked to the H_2 import terminals in Antwerp and Rotterdam in the west
- MEGAL: A connection via the Ludwigshafen hub to the Baltic Sea (Lubmin) and as well the Baltic states via Poland in the north-east and to the South Corridor in the south-east
- HYFen: A connection to North Africa and the Mediterranean in the south



Source: https://ehb.eu/maps/202302/index.html#4/49.51/16.62, abgerufen am 19. März 2023

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Action Field 3: Important Facts about the Use of H_2 in the Steel Industry

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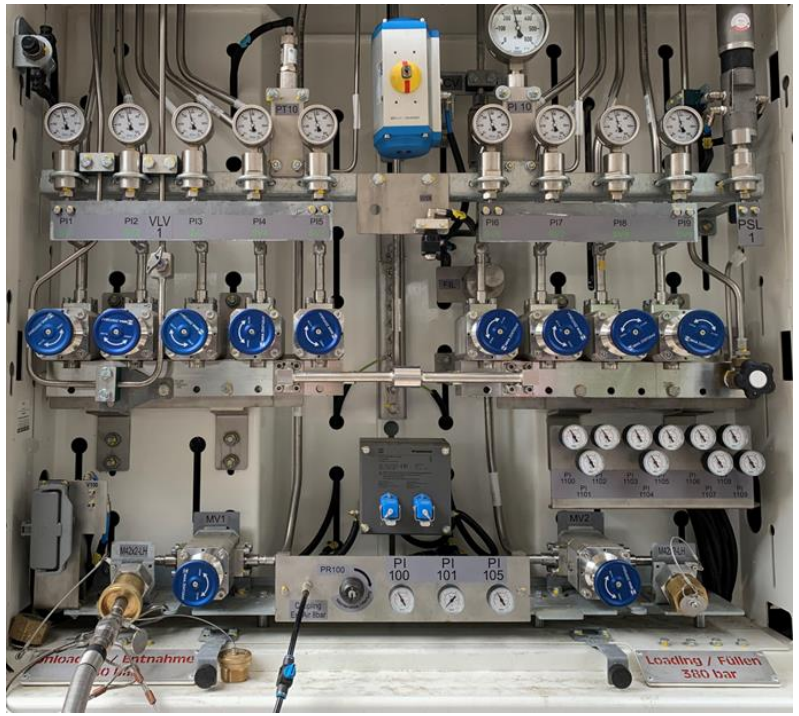
Action Field 4: Hydrogen Refuelling Station on side the Saarbahn GmbH Headquarter in Saarbrücken

- 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

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

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GFS Fuel Cells

HYDAC

BRÜCK

IZES
Institut für ZukunftsEnergie- und Stoffstromsysteme

LEFFER

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

moehwald

DILEB

se schütz engineering

PUREM
by Eberspächer

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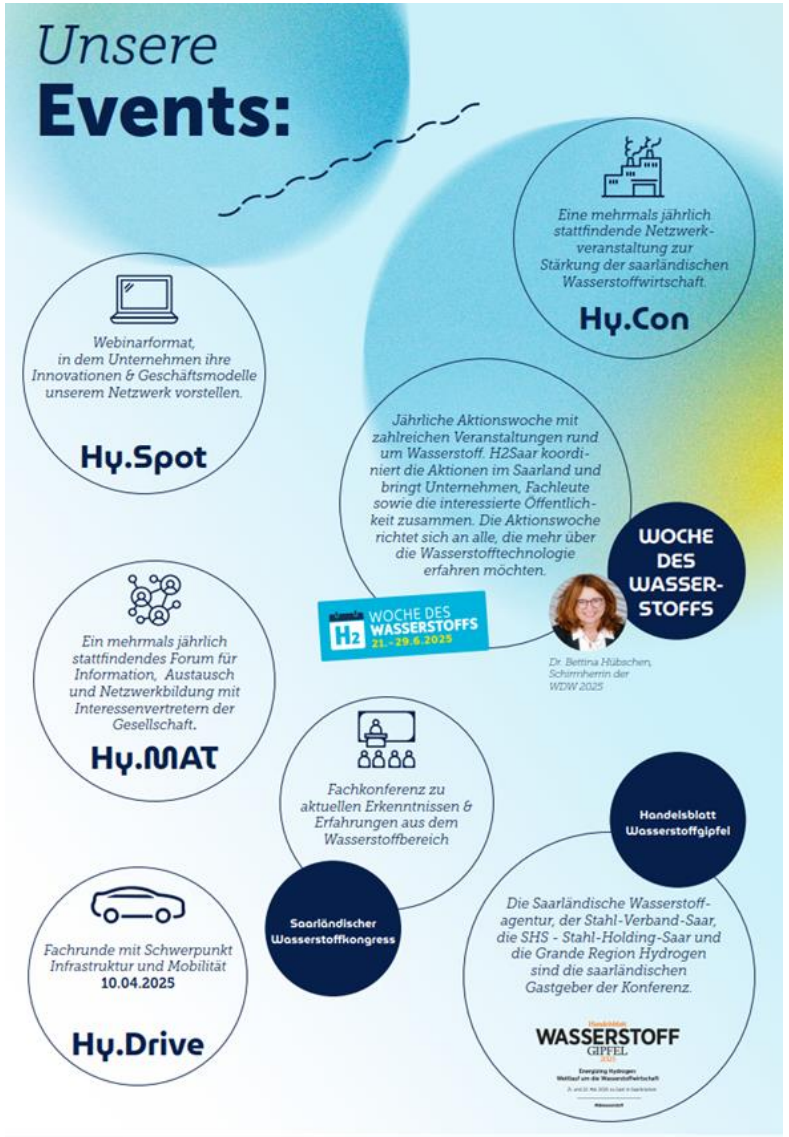
Upcoming Events organised by H2Saar



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 offtaker of huge hydrogen amounts
- Crucial for the success of a project is that all partners involved work closly together → the chicken-and-egg problem must be addressed as a top priority right from the start
- The public must be involved at an very early stage. In any case, this must happen before digging → avoid citizens' initiatives opposing your project

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

Questions?

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Dr. Bodo Groß
b.gross@h2-saarland.de
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www.h2-saarland.de