



GENVIA

The H-Pod™

Electrolysis fueled by industrial heat



Your industry

Unlock cost-efficient clean hydrogen production for hard-to-abate industries

Aviation
Maritime
Steel
Fertilizer
Refinery

Valorize heat in heavy industries through energy coupling

Cement
Glass
Geothermal
Waste
Nuclear



Our approach

Put your heat to work

Unlock superior electrolysis efficiency through the **reuse of the heat** present in most hydrogen-intensive processes such as refining and the production of ammonia, chemicals and steel.

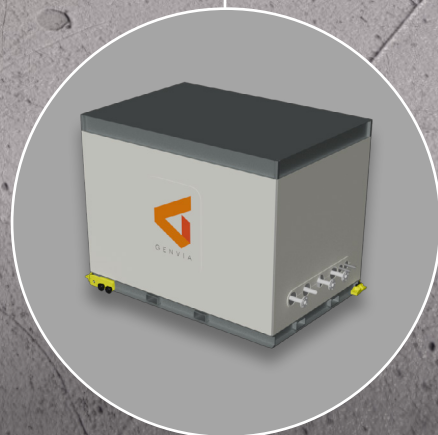
Compared to low temperature electrolysis technologies such as alkaline and PEM, our solid-oxide-based system **produces up to 40% more hydrogen** for the same electrical energy input.



Our solution

Reuse heat. Produce hydrogen. Meet H-Pod™

- Modular system, replicable up to 20MW
- Optimized Balance Of Stacks through ancillary asset mutualization for efficient power and fluid distribution
- Standard and Prefabricated to facilitate installation and commissioning



The Pod

- High-density stack layout to drive superior cost efficiency
- Plug-and-play design to ease stack replacement
- Designed for industrial-scale manufacturing

Powering a real-world industrial transition

Our electrolyzer performance stems from industrial insights, lessons from past generations and hands-on integration experience throughout the entire product lifecycle.

Constant efficiency by design

Our operating pattern preserves superior constant stack efficiency by offsetting degradation through internal temperature control.

LCOH competitiveness

Our product architecture (high-density cells, optimised stack layout, and ancillary systems mutualization) drives optimised asset cost efficiency, while reducing operational cost through superior efficiency.

Seamless maintenance

Our holistic maintenance approach, combining predictable system performance, plug-and-play Pods, and rapid temperature ramp-up and ramp-down, ensures seamless parts replacement throughout the plant lifetime.

Trusted provider

Blending end-to-end project experience with process modelling capabilities, Genvia provides the credibility required to drive complex plant projects.

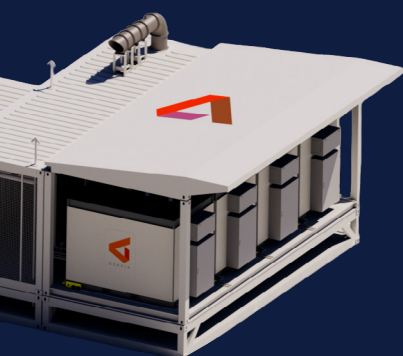
Technical specifications

The following specifications are associated with a 20MW system.

Inputs	Feed water	ASTM type 1
	Electrical consumption	20 MW
	Steam	Pressure 2.5 bar(a) / Temperature 150 ° C ¹
Outputs	Hydrogen flow rate	12, 000 kg/day ²
	Hydrogen pressure	1.4 bar(a)
	Hydrogen temperature	25 ° C, Ambient temperature
	Hydrogen purity	99.9 % vol (dry basis), Purity after drying, before cleaning
Other	Flexibility	10% - 100%
	Pod lifetime	40,000 hrs
	Compliance	CE Marked
	Sustainability	No precious materials (Pt, Ir), Optimized water cooling need

Notes:

1. Depending on the project, steam may be directly produced from industrial process (steel, e-fuel, ammonia...)
2. The specification does not include oxygen delivery performance



Optimize your project performance and economics with Genvia expertise and H-Pod™



Contact us for a tailored assessment: genvia.com