

**AEM ELECTROLYSERS FOR SCALED-UP AND
AFFORDABLE GREEN HYDROGEN PRODUCTION
@Vanguard Initiative H2 Pilot Summit**

*PERMANENT REPRESENTATION OF THE REPUBLIC
OF SLOVENIA TO EU, BRUSSELS
NOVEMBER 18TH, 2024*

VISION^{2H}

ABOUT VISION2H

Vision2H is a joint venture between **Valland SpA** and **CTA Group**.

Valland SpA is a Lombardy-based **manufacturer** of high quality and tailor-made **industrial valves** and **Additive Manufacturing** technologies enabler for Oil&Gas and Energy applications.



CTA Group is a worldwide **distributor of pipes, fittings, flanges and valves** for Chemical, Petrochemical, Refining, Gas Treatment, Power Generation and Nuclear industries.



Development of **Hydrogen related solutions** are at the core of our companies strategy and **Vision2H** stands as a testament to that.

VISION^{2H}

3

HYDROGEN CHALLENGES

CHALLENGE #1

To pursue global decarbonization green hydrogen technologies must be **developed at scale**.

OUR SOLUTION

Vision2H is building its first breakthrough 100 kW single-stack AEM electrolyser. Our stack technology development plan will enable us to deploy turnkey **AEM electrolysis solutions at multi-MW scale by 2027.**

CHALLENGE #2

To secure its role as the energy vector of the future, green hydrogen **environmental impact must be minimized.**

OUR SOLUTION

Vision2H AEM technology operates with pure water or in **very low concentrated alkaline environment** combined with **reduced/zero PGMs and PFAS contents.**

CHALLENGE #3

To represent a real game changer, **green hydrogen price must reduce significantly.**

OUR SOLUTION

Combining low design complexity, operational flexibility, rational use of natural resources and being developed at scale, Vision2H AEM electrolysers represent **versatile, sustainable and affordable green hydrogen production solutions.**

We develop and manufacture AEM electrolysers for sustainable and affordable green hydrogen production, at scale.



This is our vision of Hydrogen.

AN INNOVATIVE AND WINNING TECHNOLOGY

SIMPLE.

FLEXIBLE AND MODULAR.

AT SCALE.

SUSTAINABLE.

AFFORDABLE.

Applications

Industry   

Heavy, maritime and
air transport   

Distribution and heating 

Storage for electric energy
generation 

TECHNOLOGY SCALE UP PROGRAM

STACK DEVELOPMENT

2025 100 kW

2026 250 kW

2027 1 MW

UNIT DEVELOPMENT

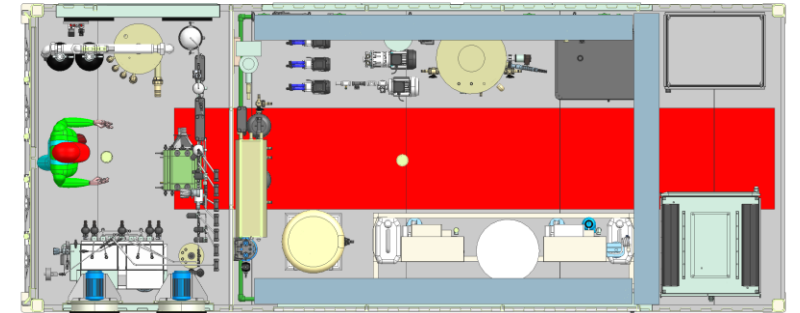
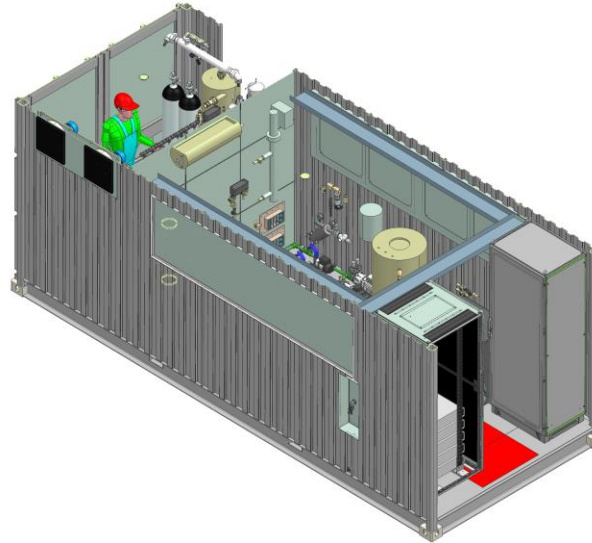
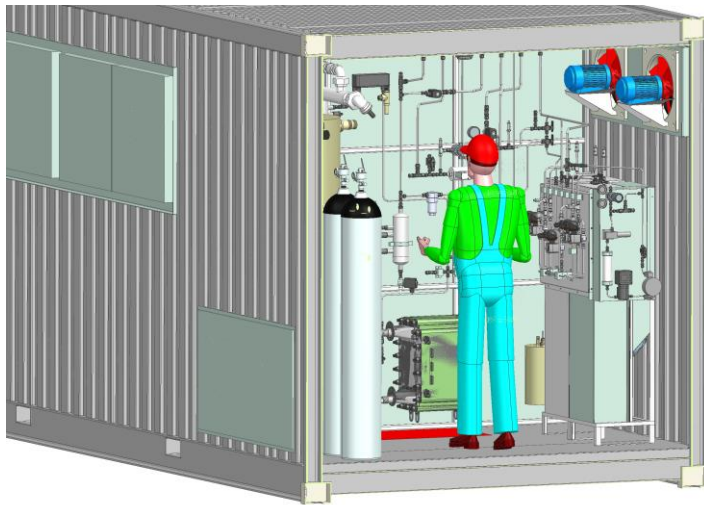
2025 100 kW

2026 1 MW

2027 MULTI-MW

2024 SO FAR

- 100 kW AEM electrolyser prototype **detailed engineering**



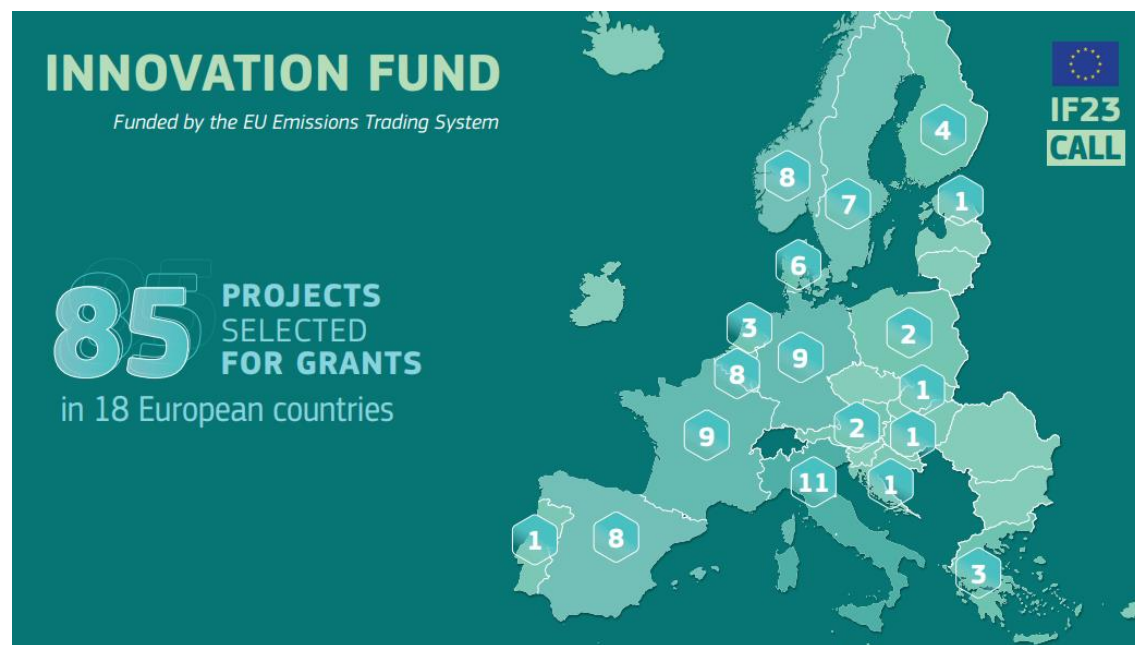
- **Procurement activities** kick-off

WHAT'S NEXT?

- Single stack 100 kW prototype **operational** by mid 2025
- Prototype demonstrative installation in **pilot projects** is under discussion
- Strengthen collaborations with **key technological partners and suppliers**
- **Technology scale up program** implementation
- And...

BIG NEWS: HZMANUNET SELECTED FOR GRANT

First-of-a-kind highly replicable factory to deploy a distributed GW-scale manufacturing network supplying Cost-Effective AEM electrolysers



With the support of:



VISION^{2H}

Thank you for your attention.

ANY QUESTIONS?

VISION^{2H}
HYDROGEN RAISED TO POWER