

Ceit pitch on topics for Clean Hydrogen calls



Non-profit RTO in San Sebastian (Spain), started in 1982 (School of Engineering – U Navarra)



**+ 1300 publications and 2000 papers
in international conferences**



270 people



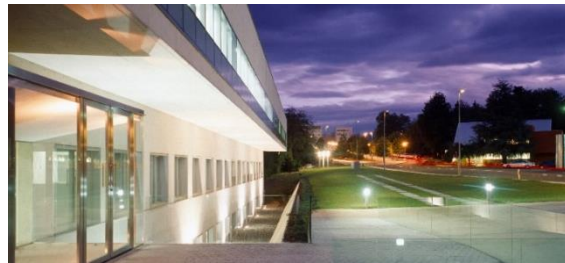
**+ de 300 jobs in
spin-offs**



25,5 M€



+ 100 EU projects



Multidisciplinary RTO:

- **Materials and Manufacturing**
- **Energy and Transport**
- **ICT**
- **Circular Economy**



2. Topics of interest in calls 2025

Topic

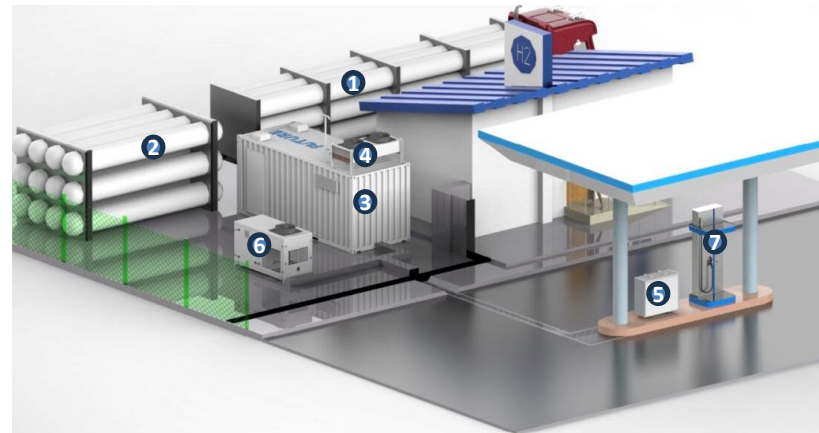
HORIZON-JU-CLEANH2-2025-02-02: Development of cost effective and high-capacity compression solutions for hydrogen

Hydrogen Refuelling Station

Hydrogen refuelling stations are key parts in the expansion/democratization of hydrogen as an energy vector, but its operational losses is holding back the deployment of this technology. An important part of these losses arise when hydrogen is compressed. Goal: is to enhance efficiency by optimizing the compressor, optimizing the station for the delivery capacity, and include new ideas to an overall loss reduction.

Expected partners:

- ☐ Compressor company
- ☐ Pipping engineering/company
- ☐ Hydrogen tank company
- ☐ Security engineering



2. Topics of interest in calls 2025

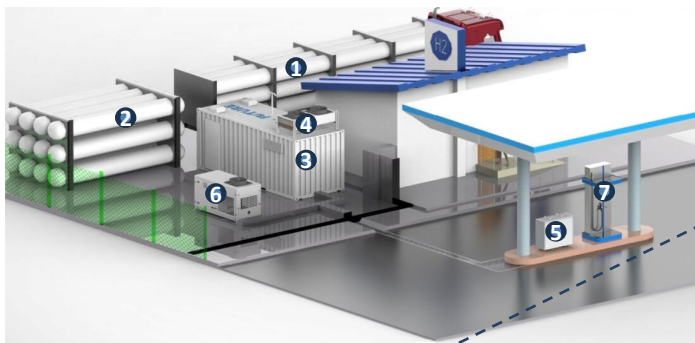
Topic

HORIZON-JU-CLEANH2-2025-02-02: Development of cost effective and high-capacity compression solutions for hydrogen

Operation Optimization

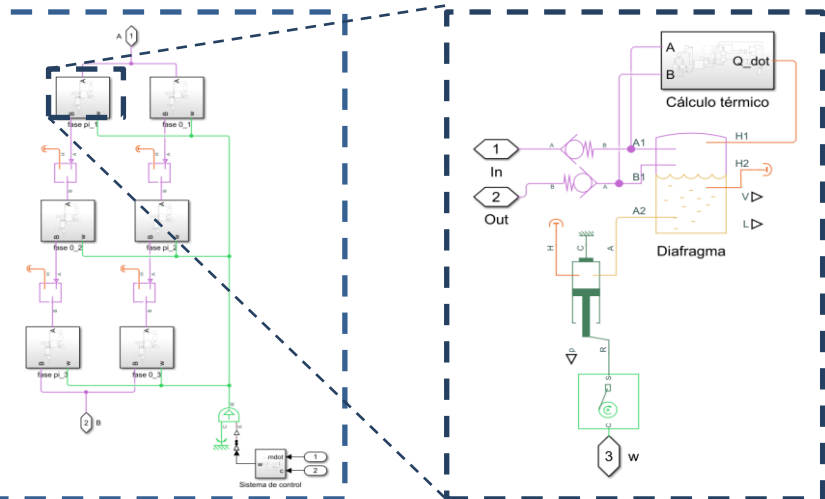
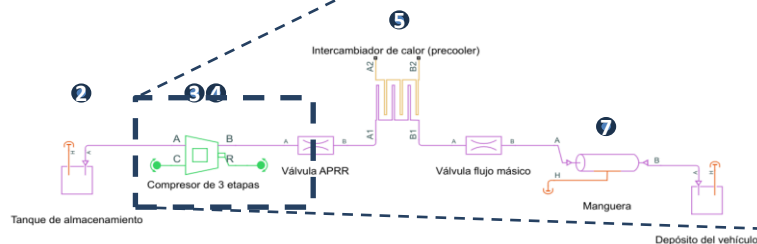
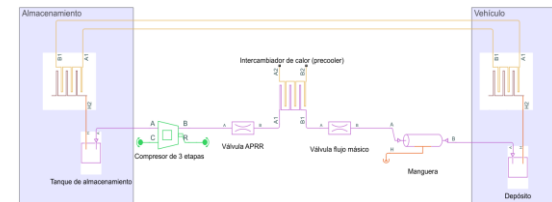
Energy and cost optimization of H₂ refueling stations:

- ❑ Multimodal
- ❑ Flexible
- ❑ Precise



New Concepts

30% Save



2. Topics of interest in calls 2025

Topic
HORIZON-JU-CLEANH2-2025-01-01: Improvements in lifetime and cost of low temperature electrolyzers by introducing advanced materials and components in stacks and balance of plant
HORIZON-JU-CLEANH2-2025-01-02: Improved lifetime and cost of high-temperature electrolyzers by introducing innovative materials and components in stacks and BoP
HORIZON-JU-CLEANH2-2025-01-03: Scale-up and Optimisation of manufacturing processes for electrolyser materials, cells, or stacks
HORIZON-JU-CLEANH2-2025-03-02: Scalable innovative processes for the production of PEMFC MEAs

Experience and Contribution

- Production of Taylor-made metallic Powders
- Manufacturing (PM routes / Additive Manufacturing)
- Full characterization of process and produced parts
- Modelling of H₂ effect on Mechanical properties and Testing capabilities in Hydrogen environment:
- Static/Dynamic testing
- Fatigue testing /Up to 100Hz
- Up to 550bar
- Various gases

