

H2

Value Proposition

We support our client with a multidiscipline, qualified engineering team that can evaluate, compare and rate different technologies in the hydrogen value chain.

We can design and write specifications and assist clients in developing any project phase:

- Renewable power generation
- Water electrolysis
- Compression and Storage
- Transport and delivery



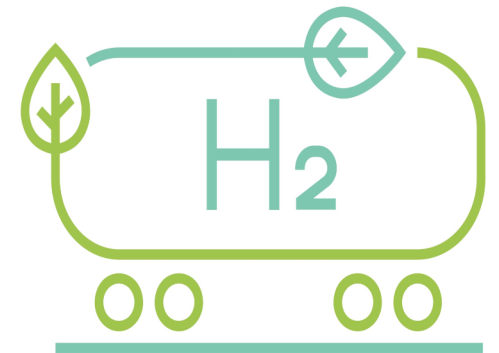
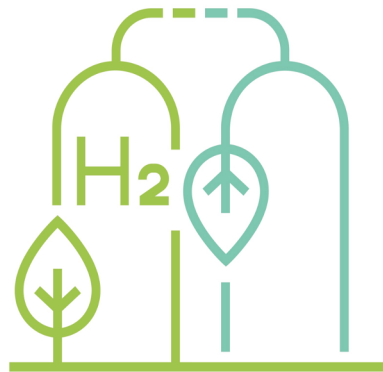
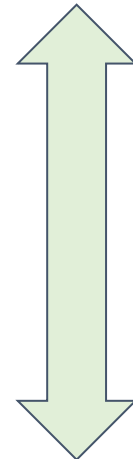
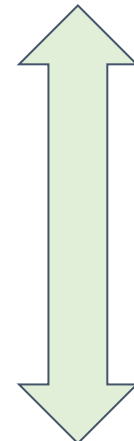
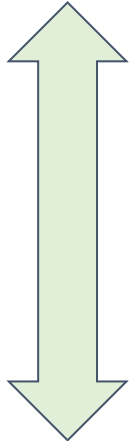
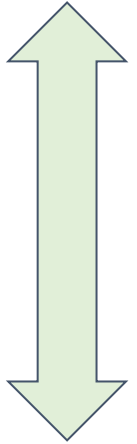
Our Services

- *Energy Demand*
- *Pre-Feed and Feed*
- *Renewable Design*
- *Detailed design*

- *Electrolysis processes*
- *Manufacturer evaluation*
- *Technology evaluation*
- *Technical Assistance*

- *Thermo fluid dynamic, pressure vessel and structural engineering*
- *Equipment manufacturing and installation*
- *Welding, corrosion and testing*

- *Land, maritime, air shipments management*
- *Logistics and warehousing*
- *Customs services*





Energy Demand, Pre-Feed and Feed

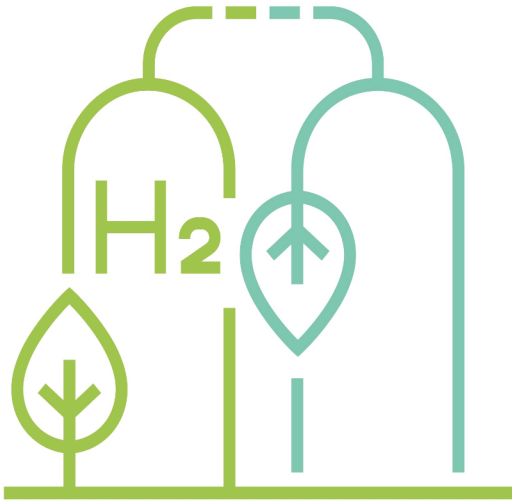
Starting from the Energy demand analysis (POD, PV, Storage size, kW-kWh, ..) our organization is able to provide the preliminary electrical engineering simulating the different energy demand scenarios sizing hybrid systems with RES, BESS and H₂.

Renewable Design

Renewable energy system design and integration with battery storage for power output. To improve power quality we are able to make harmonic studies including filter definitions.

Detailed design

Detailed engineering include single line diagram from MV to LV and DC, MV stations, transformers, MV switchgears and AC/DC or DC/DC converters , Grounding /Earthing and protection.



Electrolysis processes

Feasibility study on different main electrolysis technologies (PEM, Alkaline, SOEC) according to the project target and scope.

Manufacturers technology evaluation

Due diligence hydrogen producer, including evaluation of: work previous experience, staff qualification, manufacturing environment, suppliers and sub supplier. FMEA analysis, scoring model to choose the hydrogen producer.

Technical Assistance

Tendering procedure definition.

Electrolizers technical and performance requirement definition for bids.

Evaluating patent on international scale.



Thermo fluid dynamic, pressure vessel and structural engineering

Simulations and numerical calculations on heat exchange, process phenomena including pressure storage systems.

Main project code managed, including 3D modelling: ASME VIII Div. 1, ASME VIII Div. 2, EN 13445, EN 13480, AD2000.

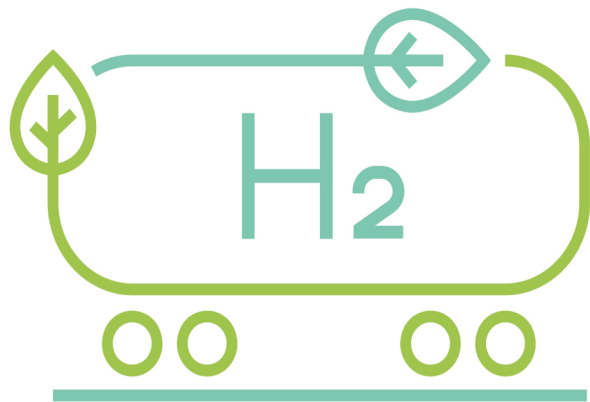
Structural engineering design according to the UBC (Uniform Building Code) and the Eurocode 1 EN1991-1-4:2005 code.

Equipment manufacturing and installation

Providing all the design data needed for the manufacturing process, including installation. Challenging is not only to meet standards but in reducing and optimizing construction and costs.

Welding, corrosion and testing

Materials and processes selection to increase equipment project life according to the specific process. Technical assistance for testing.



Land, maritime, air shipments management

Planning all freight activities of machinery, equipment, raw materials from suppliers worldwide located to the destination site, by selecting the best carriers (plane, ship, train, truck) according to client's needs, respecting the delivery times. Designing the transportation of goods of any size and status, including incoterms.

We assist the customer to define the best shipment way for plant finished product.

Logistics and warehousing

Developing storage and warehousing projects, selecting the best preservation and safety solutions. We define and verify: spaces, volumes and accessibility of storage sites including the activities of loading, unloading by identifying the most suitable technologies for the scope.

Customs services

Importing and Exporting support for customs procedure, simplifying the transit of goods on international borders.



Contacts

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