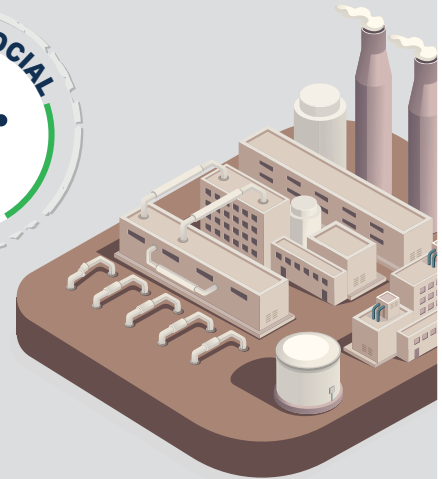




Hydrogen

Making safety the focus of your projects



Safety and risk management on a daily basis

Hydrogen is not an energy source in the true sense of the word, but an energy carrier that needs to be produced and then stored before it can be used. It is a major asset in the energy transition, making it possible to regulate the production of electricity from renewable energies and to convert the current uses of hydrogen in the industry, energy and transport sectors into green practices.

Today, although 80% of hydrogen is produced from fossil fuels, the production of decarbonised hydrogen is becoming a promising solution for the future, attracting increasing interest from many stakeholders throughout the world.

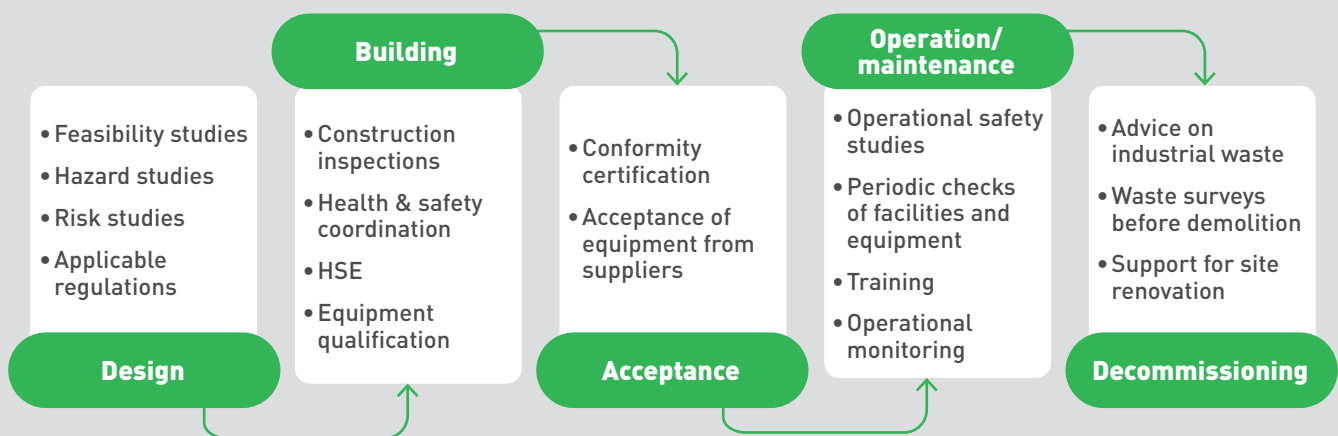
Supported by the public authorities and funding from France's recovery plan, France Relance, the

development of decarbonised hydrogen produced by electrolysis is intensifying, bringing with it specific risks that each stakeholder must take into account to ensure the success of their projects.

In order to develop the hydrogen industry smoothly and securely, SAFETY must always be a top priority.

Apave supports stakeholders in the hydrogen market at every stage of the value chain, thanks to its high level of technical expertise. Our approach is based on interdisciplinarity, drawing on the group's 5 key business activities to comprehensively support your hydrogen projects.

Our teams are at your side to inform your strategic decision-making and support you at the highest level.



Apave, your partner in the development of hydrogen

Apave's experts can help you comply with regulations, manage your risks and improve performance at every stage of your project life cycle.

Mobility



We support mobility stakeholders in:

- Securing hydrogen storage tanks from design to manufacture
- Installing and rolling out H2 refuelling stations
- The energy transition
- Optimising costs to make the acquisition of hydrogen-powered modes of transport affordable
- Training H2 operators

Industry



We support manufacturers in:

- Making hydrogen use safer
- Developing energy storage methods (heat pumps)
- Optimising the costs associated with developing the production of green, decarbonised hydrogen
- Moving towards carbon neutrality by using hydrogen as a fuel
- Designing and building hydrogen-powered facilities and equipment
- Improving the reliability and optimising the maintenance of facilities
- Converting uses of hydrogen into green practices

Energy



We work alongside energy stakeholders to:

- Ensure the safety and security of all those involved in the production of H2
- Establish the prerequisites and define the feasibility of hydrogen projects
- Optimise installations and manage energy performance
- Safeguard the development of mobility or industrial projects while improving efficiency
- Ensure the reliability of equipment and compliance with current standards
- Monitor operating costs and management systems
- Prove H2V Guarantees of Origin

What does this mean in practice?

An automotive equipment manufacturer from the Grand Est region of France called on our services during its project to develop a vehicle equipped with a hydrogen fuel cell.

Our support:

- Carry out a risk analysis of the customer's facility using HAZOP methodology
- Determine the integrity levels required for the various instrument-controlled safety functions
- Assess the HGV safety levels of the proposed technological solutions
- Recommended improvements aimed at enhancing the safety of the customer's facility
- Provide technical support based on the Machinery Directive 2006/42/EC

Customer benefits:

After our collaboration, our customer was able to guarantee the safe development of equipment fitted with the new hydrogen-based system and ensure the safety of users of its modified facilities.

Our strengths

Why choose Apave to support you in developing the hydrogen sector?

- + Your requests are managed in project mode, with a single point of contact in order to facilitate communication
- + Our complementary and comprehensive expertise
- + Our recognitions and accreditations cover the fields of energy, the environment and equipment, among others

The complete list of recognitions is available at www.apave.com

Contact US

www.apave.com

