

Commercial Presentation Theatre & Process Equipment Zone (Hall 1)

Day: 24th October
Time: 12,30 - 12,50

KIWA ITALIA

Speaker: Stephen J. McPhail



Hydrogen displacing natural gas: certification of key process equipment from production to storage to end use

Hydrogen and methane are the most effective gaseous vectors of energy, as they can be conveniently derived both from fossil and renewable sources. In the mission to reduce the use of fossil fuels, hydrogen is a preferred vector due to its flexibility in terms of generation and subsequent conversion, in particular allowing ample scope for sectoral integration (gas, electricity, mobility, industry). However, displacing natural gas with hydrogen has several technical and regulatory implications. Along the value chain, each stage (from production with electrolyzers to pipeline transport, from storage underground and above ground to conversion through combustion or fuel cells in stationary and mobility applications) comes with new characteristics to be taken into consideration as regards safety, technological feasibility, cost-effectiveness. Certification and compliance with standards are key aspects in providing the required trust on behalf of market innovators, and allow new applications to be implemented with confidence and traceability.

KIWA provides the technological know-how and regulatory expertise to help industries provide solutions that are fully compliant, tested and certified, in order to drive the transition to hydrogen as the energy vector of the future with immediate confidence and reliable revenue. Across the value chain, KIWA facilitates:

- the finalization of safe and robust product design
- verification of material compatibility
- factory and on-site inspection
- compliance with directives and permitting requirements

and through its partners can support the entire process of

- risk assessment and safety analysis prior to final certification and deployment
- traceability and guarantees of origin
- bankability studies and technical due diligence.

Within these areas of competence, KIWA focuses on the key elements in the hydrogen value chain:

- electrolysers and reformers
- underground storage and distribution networks
- tanks and pressure vessels
- hydrogen refuelling stations
- hydrogen vehicles and vessels
- industrial process retrofitting
- power generators and heating appliances.

KIWA is therefore a key partner for creating quality and trust in your transition to hydrogen.