

With BlueH₂ by T.EN™, Technip Energies aims to unleash your full blue potential

Low-carbon hydrogen is key to the global energy transition, explains, **Vinay Khurana**, VP Hydrogen Market at Technip Energies.

As a global leader in the hydrogen market with 60 years of experience and leadership in hydrogen technology, Technip Energies offers the opportunity to affordably decarbonise hard-to-abate industries and power, as well as heavy transportation at the scale needed to meet growing energy demands.

BlueH₂ by T.EN™ is a complete suite of low-carbon hydrogen solutions. From technology to design, delivery and beyond, BlueH₂ by T.EN™ is a unique suite of fully integrated, low-carbon hydrogen technology and EPC solutions from a single provider tailored to meet your specific decarbonisation and performance needs.

With BlueH₂ by T.EN™, we can deliver the best possible levelised cost for blue hydrogen production with the lowest carbon footprint across any type or scale of plant.

Proprietary ATR technology for large-capacity, ultra-blue hydrogen

As the global leader in hydrogen technology, we have added Oxidative ATR technology in alliance with Casale to our unrivaled range of proprietary SMR technology solutions to deliver large-capacity, ultrablue solutions with up to 99% carbon capture rates.

The oxidative reforming process - Auto Thermal Reforming (ATR) and Partial Oxidative (POx) - produces syngas that contains hydrogen, CO and CO₂. ATR combined with the Technip Parallel Reformer (TPR) and carbon capture technology is a cost-effective way to produce low-carbon hydrogen at



large-scale with optimised steam production.

ATR is a game-changing technology as it breaks the upper capacity limit of traditional hydrogen plants, which were economically constrained by the size of the steam methane reformer (SMR), and enables large-capacity, ultra-blue hydrogen production with up to 99% carbon capture rate.

Industry-leading steam methane reforming (SMR) technology

SMR is well suited for a full range of capacities, and we have extensive experience in this area with more than 275 hydrogen plants using our SMR technology. We can deliver top-fired reformers for hydrogen plants up to 300,000 Nm³/h (1 GW) in a single unit with optimised CAPEX and the lowest plot requirements without compromising OPEX.

The value unleashed by BlueH₂ by T.EN™

- BlueH₂ by T.EN™ offers 99% reduction in the carbon footprint compared to the traditional hydrogen process.



Our custom solutions allow us to evolve your hydrogen production to your changing decarbonisation to meet up to 99% carbon reduction, and operational needs.

- Our hydrogen plants have proven reliability and demonstrated onstream availability of more than 99% for uninterrupted hydrogen production.
- Our solution provides maximum hydrogen yield, minimum energy demand (fuel+power) and highly efficient carbon avoidance and CCUS techniques to arrive at the lowest levelised cost of (blue) hydrogen.
- BlueH₂ by T.EN™ increases our clients' profits with the coproduction of value products such as steam, synthesis gas, CO, power and derivatives.

The optimum solution for any type or scale or hydrogen application

BlueH₂ by T.EN™ comprises the proven building blocks needed to deliver the optimal low-carbon hydrogen solution regardless of plant feedstock, reforming type, plant capacity or industrial application.

In addition to serving the traditional grey and blue hydrogen business, we are evolving our technology and its application to refining and chemical manufacturing and to the decarbonisation of industries including steel, cement, power, olefins and LNG, as well as facilitating clean energy carriers. As the energy transition gathers pace, BlueH₂ by T.EN™ is making a vital contribution.

A single source for complete low-carbon hydrogen solutions

BlueH₂ by T.EN™ combines our proprietary technology with more than 60 years of project delivery experience to provide the best levelised cost of hydrogen.

We take full responsibility throughout the entire process to give cost, performance and schedule certainty. Our custom solution allows to evolve hydrogen production to changing decarbonisation and operational needs.

With BlueH₂ by T.EN™, we have all the capabilities to deliver low-carbon hydrogen solutions to meet your decarbonisation goals from small (10 kNm³/h) to mega (1,000 kNm³/h), capacity, unleashing your full blue potential across any application in new builds or revamps of existing plants.