

Mobility Plaza®

Dover Fueling Solutions explains why investing in hydrogen is a worthwhile decision

Given its potential to decarbonise heavy industry, the fuel is likely to see an abundance of private investment which should improve infrastructure across the continent, so while the initial financial outlay may be daunting for some station owners, the hydrogen market demonstrates enough growth to merit the investment.



Hydrogen: Why Your Investment Isn't Up in the Air

It's clear that hydrogen remains a central pillar on the road to net zero with the fuel predicted to make up **22% of final energy demand** globally by 2050.

Hydrogen is particularly effective in parts of the economy difficult to decarbonise such as long-haul transport with its natural abundance and easy nozzle-to-pump filling dispensation.

With the global fuel cell electric vehicle market expected to be **worth \$428.7 billion by 2032**, forecourt owners are wise to invest in dedicated hydrogen pumps to help future-proof their businesses.

However, the investment also demonstrates a significant financial contribution. Experts at **Dover Fueling Solutions** explain why this is a sound decision which will pay off in the long run.

How is hydrogen distributed and at what cost?

The distribution of hydrogen is via three main channels: pipelines, high-pressure tube trailers and liquefied hydrogen tankers.

At present, pipes typically remain the least expensive way to deliver large volumes of hydrogen, with **4,300 km of pipeline currently** in place across the continent and **23,365 km predicted by 2030**.

Another option is tube trailers which transport compressed hydrogen gas by truck, rail or sea. This is typically an expensive method and is used for shorter distances of 200 miles or less.

Liquefied hydrogen tankers are another method used to cool hydrogen to temperatures where it becomes a liquid. This is also typically expensive but can be transported more efficiently and over longer distances too.

In addition to these different logistic methods, the dispensing mechanism is more complicated too due to the various temperatures hydrogen needs to be stored and dispensed at.

As a gas, hydrogen requires storage in high-pressure tanks of around 350-700 bar or 5000 – 10,000 psi. Liquid storage, meanwhile, requires cryogenic temperatures of -252.8 degrees. Both of these can be costly procedures with an estimated **\$10 per kWh of stored hydrogen capacity**.

You may be wondering whether all of this is worth it, especially with the challenges surrounding distribution, storage and converting hydrogen.

So, is all of this expense worth it?

Clearly then, championing hydrogen fuel pumps demonstrates a significant investment for forecourts but that isn't to say it doesn't make shrewd business sense, particularly given hydrogen's stratospheric potential.

The International Energy Agency notes that the move towards hydrogen is enjoying **"unprecedented momentum"** around the world as it finally presents itself as a longstanding clean energy solution.

In Europe, the 'Basque Hydrogen Corridor' has seen **200 million investments** alone in various projects with the market expected to swell to **\$428 billion globally by 2032**.

Of course, to facilitate all of this demand and growth, the sector will need a fully scaled infrastructure which caters to the needs of drivers, be they commercial or consumer. To accommodate,

hydrogen refuelling stations are expected to grow by 17% with North America leading the growth.

The hope is that as hydrogen becomes more widely adopted, the cost of hydrogen adoption will fall dramatically. This will be in part due to technological improvements across the sector including renewable energy generation and declining costs of hydrogen electrolysis. Forecasters predict that the **costs of hydrogen production could decline as much as 50% by 2023 and 70% by 2050.**

In fact, stock market analysts Motley Fool believe that hydrogen is one of the best alternative fuel investments to make right now. Given its potential to decarbonise heavy industry, the fuel is likely to see an abundance of private investment which should improve infrastructure across the continent. The website estimates that it could well become a multi-trillion industry of the future.

Conclusion

While the initial financial outlay may be daunting for some station owners, the hydrogen market demonstrates enough growth to merit the investment.

For more information, [visit our website.](#)

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