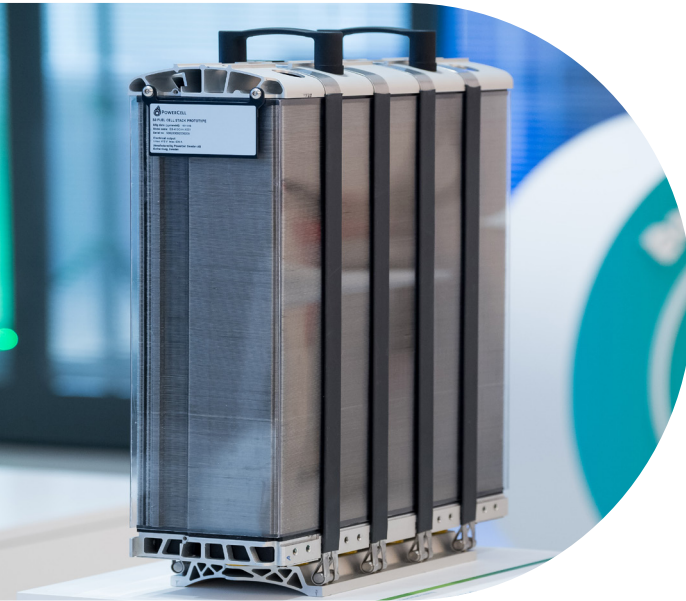


Fuel cell stack. Picture credit: The Bosch Group

WPIC® 60 SECONDS IN PLATINUM



PLATINUM OPPORTUNITY

The US Inflation Reduction Act could benefit platinum demand by accelerating growth in green hydrogen production and fuel cell electric vehicle adoption

According to a recent report*, capturing the maximum climate value of hydrogen to deliver the 2050 net zero carbon emissions target requires a tripling of investments in hydrogen projects by 2030 to US\$700 billion, equivalent to an additional US\$460 billion over and above the US\$240 billion of direct investment between now and 2030 already announced.

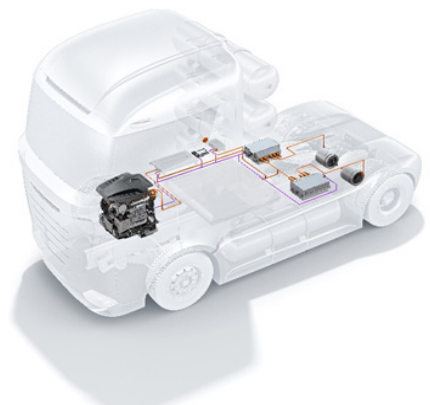
In this context, the US Inflation Reduction Act (IRA), 2022 has been welcome news. Passed by Congress during August it aims to invest US\$369 billion over ten years into energy and climate programmes, injecting significant sums into clean energy and electric vehicle incentives and programmes.

It is being hailed as a game changer for the growing green hydrogen sector. By offering a US\$3 per kilogram tax credit for lower carbon hydrogen, subject to certain requirements, it is expected to make green hydrogen produced in the US the most cost competitive in the world. At the same time, the IRA also includes a variety of grants supporting the domestic production of clean transportation technologies, including hydrogen fuel cell electric vehicles (FCEVs).

Hydrogen – the most abundant element on earth – is already used as a fuel source in industry. As it contains no carbon, it produces zero emissions, only water. However, its credentials as a truly sustainable

fuel source rest on the way in which it is produced. Green hydrogen is completely carbon free as its production does not involve the use of any fossil fuels.

Due to its unique chemical and physical properties, platinum is at the forefront of proton exchange membrane (PEM) applications – transformative technology that holds the key to unlocking the zero-emissions potential of hydrogen. PEM technology is used in both electrolyzers to produce green hydrogen from renewable energy and in hydrogen fuel cells which can power FCEVs. The passing of the IRA is expected to stimulate the use of green hydrogen in industries that are looking at ways of decarbonising such as shipping, aviation, heavy industry and transport.



The Bosch Group recently announced it would invest more than US\$1 billion globally to develop mobile fuel cell technologies by 2024. Picture credit: The Bosch Group

Investment boost

The hydrogen division of Howden, the provider of hydrogen compression solutions, has already stated that it will step up its investment in hydrogen projects in the US on the back of the IRA.

Subsequent to the passing of the IRA, Bosch, a global supplier of technology and services, announced a US\$200 million investment to produce hydrogen fuel cell stacks in the US. The fuel cell stacks will be used to drive hydrogen-powered

trucks coming to the roads of the US in the next few years, with Bosch aiming to be one of the first to market with large-scale production to support hydrogen-powered commercial vehicles. The company recently announced it would invest more than US\$1 billion globally to develop mobile fuel cell technologies by 2024.

**Hydrogen Insights 2022 - The Hydrogen Council in collaboration with McKinsey & Co.*

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