The world is switching to lower carbon sources of energy to power the global economy. Wind and solar are excellent sources of electric power but cannot meet the needs of transportation and heavy industry which together account for 35% of global GHG emissions. Hydrogen is the best solution to help tackle critical, hard-to-abate sectors, such as heavy industry and long-distance transport.

Whether used in fuel cells to produce electricity from chemical reaction or combusted to produce heat, hydrogen combines with oxygen resulting only in water as a byproduct. Industries that are normally associated with major carbon emissions now have the ability to eliminate those issues and commit to a cleaner future.

By making hydrogen more accessible, BayoTech is setting us on the path to a future with fewer emissions.

BayoTech™

www.bayotech.us
HYDROGEN PRODUCTION PATHWAYS

WHERE DOES IT COME FROM & HOW DO WE MAKE IT?

Hydrogen is the lightest element so it’s inefficient to move it over long distances. Liquifying hydrogen to get more into a shipment is expensive and wastes energy. Instead of relying on large, central plants and long-distance transportation, hydrogen can be produced locally from natural gas, biomethane, or electricity. Local hydrogen from any source used in a fuel cell dramatically lowers carbon emissions versus diesel and gasoline. Local availability of resources will influence which method of production is most cost effective and lowest carbon.

BayoTech plans to make low-cost, low-carbon and even carbon negative hydrogen widely available through a network of distributed BayoGaaS Hubs. These hubs will be strategically located throughout the US and UK to deliver high-pressure hydrogen gas shorter distances and for a lower cost.

BY THE NUMBERS

GREATER THAN 11,000
Hydrogen fueled vehicles in the U.S.

10 MILLION
Metric tons (mmt) of hydrogen produced in the U.S. each year.

3X GREATER THAN GASOLINE
Hydrogen has the highest energy content by weight of all known fuels.

THE U.S. HYDROGEN
Industry has the potential for $140B in revenues and 700,000 jobs.

HYDROGEN SAFETY

For over 50 years, hydrogen has been safely used, stored and transported. When compared to other fuels, such as gasoline and natural gas, it is considered safer to use.

When discussing the safety of hydrogen it’s important to keep these things in mind:

- Hydrogen is 14 times lighter than air. If released, hydrogen disperses quickly rather than pool at ground level, where accidental ignition presents a clear danger.
- Hydrogen burns at a low radiant heat due to the absence of carbon. This lowers the risk of secondary fires.
- Hydrogen is non-toxic. Leaks or spills do not contaminate the environment.
- Thanks to decades of research and testing by private sector companies, the U.S. Department of Energy and other global entities have created safety codes and standards for everyone to follow for proper use of hydrogen systems.

Moving forward, industry and government institutions continue to make safety a key priority to ensure that hydrogen becomes part of a clean and thriving part of a decarbonized economy.