Lee Enterprises Consulting Offers Green Hydrogen Consulting Services

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Lee Enterprises Consulting, a bioeconomy consulting group based in Cambridge, MA, is pleased to announce they are offering green hydrogen consulting services. Hydrogen is gaining in popularity as a key contender in the goal of decarbonizing electricity generation and transportation in a worldwide scale. Companies are ramping up their efforts to increase hydrogen production as a result of government incentives and environmental regulations.

The hydrogen produced is classified into various categories with each category provided with a unique color code. These are: green, blue, brown, and even unconventional variations such as yellow, turquoise, and pink. These color codes function as practical indicators, making it easier to differentiate the various hydrogen sources and production methods. It is important to point out that these color-coded differentiations don?t have a universal standard. Instead, they are dynamic and continue to evolve over time. Thus, stakeholders in the hydrogen industry must keep themselves informed with the evolving terminology and regional differences.

The hydrogen produced from coal through a highly carbon-intensive procedure is called black hydrogen and brown hydrogen. While historically, these were significant sources of hydrogen, they have a significant

environmental impact since they contribute substantially to greenhouse gas emissions.

Gray hydrogen is mainly produced from methane, via a process known as steam methane reforming. It is a popular production method for hydrogen, but it also results into significant carbon emissions.

Pink hydrogen is produced through electrolysis that is powered by nuclear energy. This can also be called red hydrogen or purple hydrogen. Meanwhile, the use of nuclear energy also offers the advantage of the very high temperatures from the nuclear reactors possibly being used in other processes of producing hydrogen where the steam is used for more efficient electrolysis or fossil gas-based steam methane reforming.

Turquoise hydrogen is relatively new and is produced through methane pyrolysis that generates hydrogen and solid carbon. This production process has yet to be proven at scale, but it has the potential of being a low-emission hydrogen production process with the thermal process being powered with renewable energy and the carbon being permanently stored or used.

Green hydrogen is produced via water electrolysis and uses zero-carbon electricity. It is considered to be the most environmentally friendly hydrogen production process because it produces no carbon emissions. At present, only about 4 percent of the world?s hydrogen can be considered as ?green hydrogen.?

Blue hydrogen is produced from fossil fuels. It integrates carbon capture and storage (CCS) technology to capture and permanently store underground most of the carbon dioxide emissions. Thus, blue hydrogen strikes a balance between traditional and green hydrogen production processes.

Yellow hydrogen is also a relatively new process where hydrogen is produced via electrolysis using solar power.

White hydrogen is a naturally occurring process. Geological hydrogen has been discovered in underground deposits and they have been generated by fracking. However, there are no strategies at present to exploit this hydrogen on a massive scale.

A spokesperson for Lee Enterprises Consulting says, ?Approximately 95 percent of hydrogen production in the United States falls under carbon-intensive categories (black, brown, or gray). This significant reliance on such methods contributes to hydrogen production being responsible for 2.2 percent of global emissions, underscoring the need for cleaner and more sustainable hydrogen production technologies. The emergence of green hydrogen represents a significant boom in the quest for sustainable energy solutions. It stands out as an environmentally superior alternative to other hydrogen varieties, primarily owing to its sustainable production methods. With the guidance of our hydrogen experts, we can navigate the complexities of this burgeoning field and work towards a greener, hydrogen-powered future.?

Founded in 1995, Lee Enterprises Consulting has evolved into the world?s leading bioeconomy consulting group with more than 170 experts all over the world. Their experts are world-famous leaders in their fields with each chosen based on their experience, education, and reputation. They have been involved in thousands of projects in various parts of the world. The company is divided into a number of sections: biomaterials & biochemicals, biofuels, feedstocks, and biotechnologies. Their services include engineering & project oversight, due diligence & funding, legal & regulatory services, and project development & operations.

Those who are interested in green hydrogen consulting services can check out the Lee Enterprises Consulting website or contact them on the phone or through email.

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Lee Enterprises Consulting

Our leaders are the top talent in the industries they serve, chosen based on their experience, ability to clearly define and communicate, and excellence in directing projects and interfacing with clients.

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