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Engineer Unveils 35 Inventions for an Emissions Free Planet

Inventions pre-empt "Carbon Capture", enable economic, emissions free fossil fuels

(WASHINGTON D.C., June 19th, 2019) – Mechanical engineer, Jared Moore, Ph.D., has unveiled 35 inventions, introduced through a new 8-part video series, which are intended to enable an industrialized, emissions free planet.

The economic implication is that nearly all pollution could be eradicated without increasing costs.

The key insight of the inventions is that electrolyser cells and fuel cells can also filter pure oxygen that is useful to fossil fuels. By utilizing this pure oxygen for fossil fuels, not only is energy efficiency improved, but the fossil fuels only create what is called "sequestration ready" CO_2.

"Sequestration ready" CO_2 is significant because, unlike fossil fuels oxidized with atmospheric oxygen, it is not diluted with atmospheric nitrogen. Therefore, it pre-empts the need for "Carbon Capture", which is thought to be inherent to emissions free fossil fuels and makes up ~90% of the costs.

Furthermore, the versatility of carbon (and the other organic elements) can be leveraged to produce pumpable, easy-to-distribute, hydrogen carriers.

These energy carriers enable flexibility system-wide—namely seasonal energy storage and then electricity and heat supply that is available on-demand at the distributed level or off-grid.

Mr. Moore reiterates throughout the video series, "This is a together-everyone-achieves-more situation." He adds, "The flexibility of the hydrogen carriers enhances electricity reliability while improving utilization of renewable and nuclear energy; the hydrogen carriers are also important for implementation since they can be distributed through the existing pipeline system."

These inventions constitute what Mr. Moore has named the "Thermal Hydrogen" economy. The name is derived from the underlying engineering philosophy: heat distribution through chemicals.

Mr. Moore contends that by using chemical processes to absorb and distribute heat, the system, though seemingly complicated, remains efficient. He says that the heat losses inherent to cells and pumps—friction, not compression—is more than made up for by avoiding inefficient, pneumatic processes: carbon capture, hydrogen compression, baseload power plants, and internal combustion engines.

The video series is an update to a peer reviewed paper published in 2017 in the International Journal of Hydrogen Energy. The paper showed multiple economy-wide pathways which all improve efficiency.

The International Patent Office has reviewed the initial patent application and found the claims to be "novel and inventive". Patents are pending for all 35 inventions of the video series.

The inventions, as well as the global implementation plan, are explained in further detail over a six hour, 8-part video series. To learn more or to support this private effort, please visit ThermalHydrogen.com.

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