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Greyrock Highlights the Environmental Benefits of Converting Flare Gas to Clean Fuels in an International Peer Reviewed Paper

Sacramento, California (July 10, 2018) – Greyrock announced today that it has completed an international research study in collaboration with the National Renewable Energy Laboratory (NREL) to determine the potential reduction of greenhouse gases and criteria pollutant emissions from the conversion of flare gas directly to synthetic fuels. The results of this study were published in the International Journal of Energy and Environmental Engineering (https://doi.org/10.1007/s40095-018-0273-9).

Greyrock's Flare-to-Fuels™ conversion process was used as the technology for this study. The Greyrock process converts methane and other wellhead gases that would otherwise be burned or flared into a premium synthetic diesel fuel and a synthetic gasoline blendstock.

While the Greyrock synthetic diesel fuel can be used neat (without blending), when compared to the use of petroleum derived diesel, a blend of 20% Greyrock synthetic diesel and petroleum derived diesel was found to significantly improve engine performance, increase fuel economy, and reduce emissions. This blend was also found to reduce criteria air pollutant emissions by an average of 28%, 18%, 24% and 5.5% for hydrocarbons, particulate matter, carbon monoxide, and nitrogen oxides from 1996 to 2015 diesel vehicles.

There is a global potential to produce up to 71.1 billion liters of synthetic fuel per year from flare gas. The study further established that the beneficial use of globally available flare gas for the production and use of synthetic fuel could reduce worldwide emissions of carbon dioxide and methane by up to 356 and 5.96 million metric tons/year, respectively. This represents a significant reduction of greenhouse gas emissions. Criteria emissions could also be reduced by up to 23.3, 0.37, 42.4, and 61.3 million metric tons/year globally for carbon monoxide, particulates, nitrogen oxides, and hydrocarbons, respectively. These clean mobility solutions may be realized without any changes to existing automotive infrastructure.

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About Greyrock

Greyrock has developed its state of the art Direct Fuel Production™ technology and GreyCat™ catalyst, enabling distributed production of clean liquid fuels from a variety of resources including natural gas, natural gas liquids, flare gas, bio-gas, biomass residues, carbon dioxide (CO_2) and other wasted and low-value resources. More information about Greyrock is available at www.greyrock.com and www.FlaretoFuels.com.