

## Executive Summary – Jupiter Oxygen Corporation Article 2

The increasing concentration of greenhouse gases in the planet's atmosphere is making the planet warmer and is pressuring all sectors, public and private, to come to a common understanding of the short- and long-term implications. We are confronted with, perhaps, the most formidable technological challenge in human history; to reduce GHG emissions by half in ten years while meeting the rising demand for energy.

Renewable energy is set to play a central role in our future. However, there is no viable scientific evidence that, even with the growing public and private sector funding, renewable energy sources can replace a US\$25 trillion global energy infrastructure in ten years. Simply, transition to 100% renewables cannot happen with the technology or science we have today. What we *do* have today are transitional technologies; low carbon innovations whose development in terms of scope and scale of GHG mitigation are either at or near commercial scale.

Any strategy to reduce GHG emissions must include consideration of the global energy mix. Globally, fossil fuels are the principal suppliers of the energy mix. About 75% of global GHG comes from fossil fueled emissions for energy. Driven by what is projected to be a doubling in global electricity demand and by the preference for fossil-based energy production around the world (by cost, efficiency and reliability measures) a clean energy transition has begun in the power and energy industry. Decarbonizing the power sector with carbon capture can result in a 90% reduction in greenhouse gases and net zero across the value chain.

Carbon capture is the singular most important technology in climate mitigation plans, globally. As of the writing of this paper, there are nearly 350 coal-fired power plants in pre-construction phase, globally. Multiple sources have underscored the necessity of the deployment of carbon capture projects in conjunction with these new builds. With more than 400 near- and medium-term carbon capture opportunities in the U.S. alone today, these projects are estimated to prevent nearly 4.4 gigatons of CO<sub>2</sub> from entering the earth's atmosphere. Previously identified as too-costly, tax incentives and policy initiatives are creating a credible near-term investment opportunity and are key in the maturation of a carbon-free energy infrastructure.

Jupiter Oxygen Corporation is a privately held company in Chicago that has patented an innovative carbon capture technology to capture CO<sub>2</sub> emissions at the source. Our High Flame Temperature Oxy-Fuel carbon capture technology features significantly in every low carbon scenario resulting in an economically efficient and carbon neutral energy supply. Our pragmatic and practical approach will augment the environmental benefits at near zero emission coal-fired power plants. Positioned to be first-of-a-kind carbon capture in Wyoming, Jupiter Oxygen has a valuable role in unlocking the profitability of carbon capture.