EQUINOX®
Carbon Capture

CARBON CAPTURE
and Sequestration

CO_2 Capture

CO_2 Compression / Dehydration

Dense Phase CO_2 Transportation

Beneficial Use

Expertise in Carbon Capture

From project concept to operation

Equinox has world-class expertise in reducing carbon emissions from gas processing, power generation and industrial facilities through carbon capture.

Carbon capture typically involves the removal and purification of CO_2 from the industrial producer, followed by a dehydration and compression stage to allow for transport of dense phase CO_2 for sequestration, enhanced oil recovery, or beneficial use.

There are several technologies available to capture CO_2 (as well as other contaminants such as H_2S, mercaptans, nitrogen, mercury, water, etc.) from combined gas streams, including amine sweetening, membrane, pressure swing adsorption.

EQUINOX® Carbon Capture

Post carbon capture, the gas stream (often referred to as acid gas) will have very high percentages of CO_2 (and H_2S in certain natural gas processing applications). There are multiple solutions to achieve given dehydration specification to avoid the significant corrosion risk inherent to acid gas. Regarding compression – the appropriate technology, driver, sizing and configuration for the application must be evaluated.

Distribution of dense phase or gas phase CO_2 requires consideration of numerous factors for the pipeline system regarding throughput, pipeline diameter, pressure as well as water content monitoring, material selection, metallurgy and corrosion mitigation.

CO_2 sequestration, Acid Gas Injection (AGI), Enhanced Oil Recovery (EOR) and the design and specification of pipeline, wellhead equipment and downhole tubing/casing system are key topics.

There are many industrial applications for captured CO_2 within the chemical industry (urea, fertilizer production), in addition to applications for fire suppression and numerous manufacturing applications.

EQUINOX® Engineering

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