Carbon management solutions for a net zero world

Around the world, new ways of producing and consuming energy are emerging with a focus on low-carbon solutions to meet net zero goals. WSP helps clients reduce their carbon footprint through various clean energy strategies, including carbon capture, utilization and storage (CCUS) as well hydrogen production, storage, distribution and utilization. Our work in CCUS and hydrogen is part of our Future Ready® approach, aimed at shaping a sustainable future and advancing environmental, social and governance (ESG) principles.

The research firm Verdantix recently named WSP a market leader for ESG and Sustainability Consulting.

THE WSP DIFFERENCE

WSP has long been a CCUS leader, from our early work in designing and drilling Class II acid gas injection wells for carbon dioxide and hydrogen sulfide to our current work on Class VI wells.

Our full suite of services includes geologic feasibility studies, UIC Class VI permitting, surface facility design, and environmental and land use studies. We offer expertise in various methods for carbon dioxide removal, transportation, and injection.

WSP offers experience and expertise across the full hydrogen value chain.

Our “Whole Energy System” approach covers the hydrogen economy, with services in major areas including energy infrastructure, hydrogen production and distribution, underground storage, and hydrogen refueling facilities, along with a deep understanding of hydrogen economics.

**PROJECT EXPERIENCE**

**Geologic Screenings for Carbon Capture Sequestration**

WSP has performed geologic screenings for carbon dioxide (CO2) sequestration (CCS) at nearly 30 sites across 11 states in the United States and in Ontario, Canada. Ongoing screening include 12 sites in 5 additional states.

**Geologic Screenings for Class II Acid Gas Injection of CO2**

WSP is conducting geologic screenings for CO2 disposal through Class II Acid Gas Injection Wells to determine the viability of subsurface geologic confinement at several gas processing facilities in New Mexico and Texas. Pending their evaluation, WSP is prepared to develop necessary permit applications and Monitoring, Reporting, and Verification (MRV) plans associated with AGI projects.

**Class VI Permit Applications for CCS**

WSP has submitted one Class VI Injection Well Permit Application and is preparing to submit two additional applications for CCS. WSP supports this process by compiling all application information for the well.

**CNRL – HAYS CO2 Injection and Dehydration, Alberta, Canada**

This project consisted of the design and installation of CO2 injection facilities, including compression dehydration, pipeline and wellhead facilities. The CO2 produced off the acid gas enrichment (Flexsorb) unit, which was designed and installed during a previous project completed by WSP at a design flow rate of 3.1 MMscfd, containing up to 1000 ppm H2S, is compressed by a five-stage, six-throw, reciprocating 1250 hp compressor; designed for a normal discharge pressure of 2311 psig.

**Keyera-Simonette Acid Gas Disposal, Alberta, Canada**

WSP completed a brownfield Acid Gas Injection project for Keyera at their Simonette Gas Plant near Valleyview, Alberta. The AGI project will allow Keyera to decommission its existing Sulphur Recovery Unit which was not meeting the quality and efficiency levels outlined by the Alberta Energy Regulator (AER). The project involved compression and TEG dehydration of acid gas ranging from 5% H2S to 40% H2S at flowrates from 1.1 to 5.1 MMscfd and injection of that acid gas at a well 3.1 miles away.

**Birchcliff Energy-Pouce Coupe South Gas Plant, British Columbia**

This project involved the construction of a new stand-alone sour wet gas processing facility with a capacity of 80 MMscfd of sour gas and 306 bbl/d of free sour condensate. The sour facility included inlet separation and compression, amine sweetening, refrigeration, sales compression, acid gas compression for disposal on an adjacent acid gas well and condensate stabilization.

**Morrison Petroleum, Watelet Gas Plant, Alberta, Canada**

This project consisted of a gas plant expansion, designed in compliance with current environmental regulations, that processes and disposes up to 800 MMscfd of acid gas with a composition of 24/76% H2S/CO2. This was a wet acid gas injection facility with no dehydration and one disposal injection well situated within the plant boundary.

**CarbonNet project, Australia**

The Victoria Government DPI in Australia employed WSP to undertake a transport study for the CarbonNet Project. Our services addressed the onshore and offshore aspects of transporting carbon dioxide (CO2) leading to a further detailed feasibility study. These studies have defined the environmental constraints associated with various pipeline route corridors and set a boundary for the CO2 specification - a key concern in relation to transportation of CO2.

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**ABOUT WSP**

WSP USA is the U.S. operating company of WSP, one of the world’s leading engineering and professional services firms. Dedicated to serving local communities, we are engineers, planners, technical experts, strategic advisors and construction management professionals. WSP designs lasting solutions in the buildings, transportation, energy, water and environment markets. With more than 12,000 employees in over 200 offices across the U.S., we partner with our clients to help communities prosper.

**CONTACT US**

For more information about how we can help you deliver your next project, contact:

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