



Petra Nova CO₂ capture project

Thompsons, TX

NRG FACT SHEET
CARBON CAPTURE

Overview

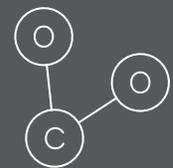
In a 50/50 joint venture with JX Nippon Oil & Gas Exploration, we've built the world's largest post-combustion carbon capture project at our WA Parish Generating Station southwest of Houston, Texas.

The Petra Nova project, which began operations in 2016, was selected by the U.S. Department of Energy to receive a \$190 million grant as part of the Clean Coal Power Initiative Program, a cost-shared collaboration between the federal government and private industry.

The Petra Nova project uses the carbon capture technology known as the KM CDR Process[®] to separate carbon dioxide (CO₂) from coal plant flue gas. Kansai Electric Power Co. and Mitsubishi Heavy Industries developed the technology, which uses a high-performance solvent for CO₂ absorption and desorption.

The Petra Nova project is designed to capture about 90 percent of the CO₂ from a 240-megawatt equivalent (MWe) slipstream of flue gas. The project then combines carbon capture with enhanced oil recovery (EOR) to increase production at mature oil fields along the Gulf Coast and, in the process, sequester the CO₂ underground.

NRG and JX Nippon teamed with Hilcorp Energy Company to inject captured CO₂ from WA Parish into the West Ranch oil field about 80 miles southwest of the plant. Through EOR, oil production at West Ranch is expected to jump from around 300 barrels a day to a peak of 15,000 barrels a day. The oil field is estimated to hold approximately 60 million barrels of oil recoverable through EOR operations.



Carbon capture keeps

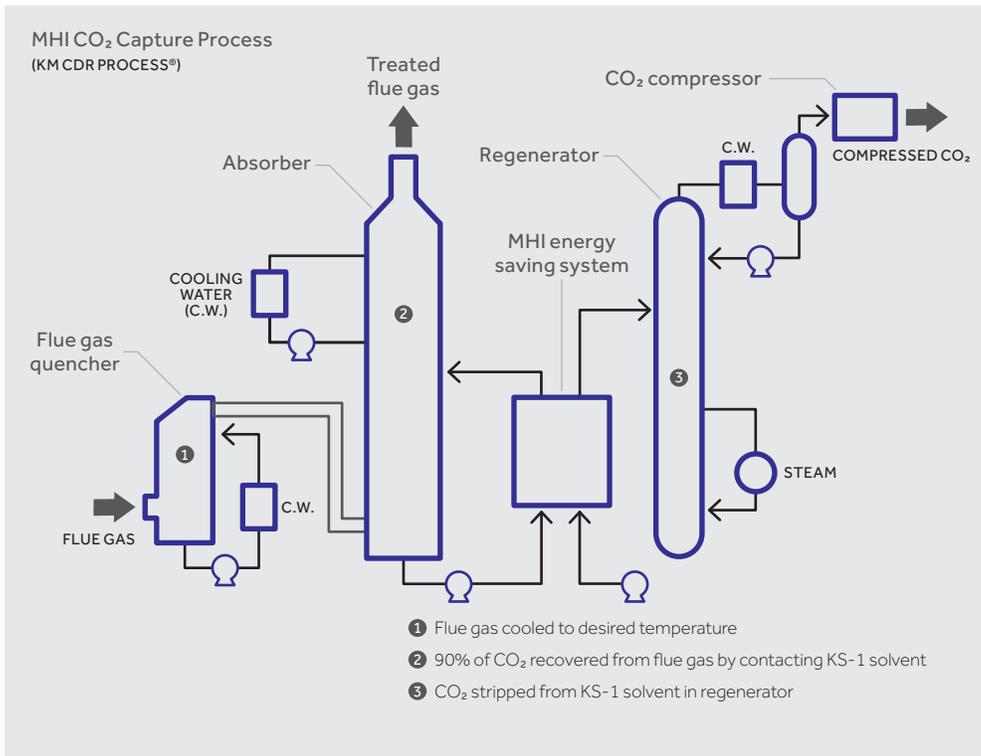
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Coal-fueled power generation

Coal is one of America's most abundant domestic energy sources, generating about one-third of the country's electricity in 2015, according to the U.S. Energy Information Association (EIA). However, coal is a carbon-intensive fuel. The EIA attributed about 71 percent of the U.S. electric power sector's 2015 CO₂ emissions to coal plants.

Post-combustion carbon capture can help us continue to use coal more responsibly to meet the nation's growing energy demand by reducing our carbon footprint.

Independent verification

Comprehensive geological data about the formation, its production history and commercial EOR surveillance significantly increases confidence in CO₂ storage performance. The University of Texas Bureau of Economic Geology, with its globally recognized expertise and

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