

WA Parish CO₂ Capture Project

NRG FACT SHEET



Located in
Thompsons, TX



Carbon capture demonstration will prevent

90%

of the carbon in a

240 MW

slipstream of flue gas from entering the atmosphere

Project Overview

Petra Nova, a 50/50 joint venture between NRG Energy and JX Nippon Oil & Gas Exploration, is developing a commercial-scale post-combustion carbon capture project at NRG Energy's WA Parish generating station southwest of Houston, Texas.

The project is designed to capture approximately 90 percent of the carbon dioxide (CO₂) from a 240 MW slipstream of flue gas and use or sequester 1.6 million tons of this greenhouse gas annually. The project facility is expected to be operational in 2016.

At 240 MW, Petra Nova WA Parish will be the largest post-combustion, carbon capture project installed on an existing coal-fueled power plant and the first commercial scale in the U.S. The technology has the potential to enhance the long-term viability of coal-fueled power plants across the US and around the world.

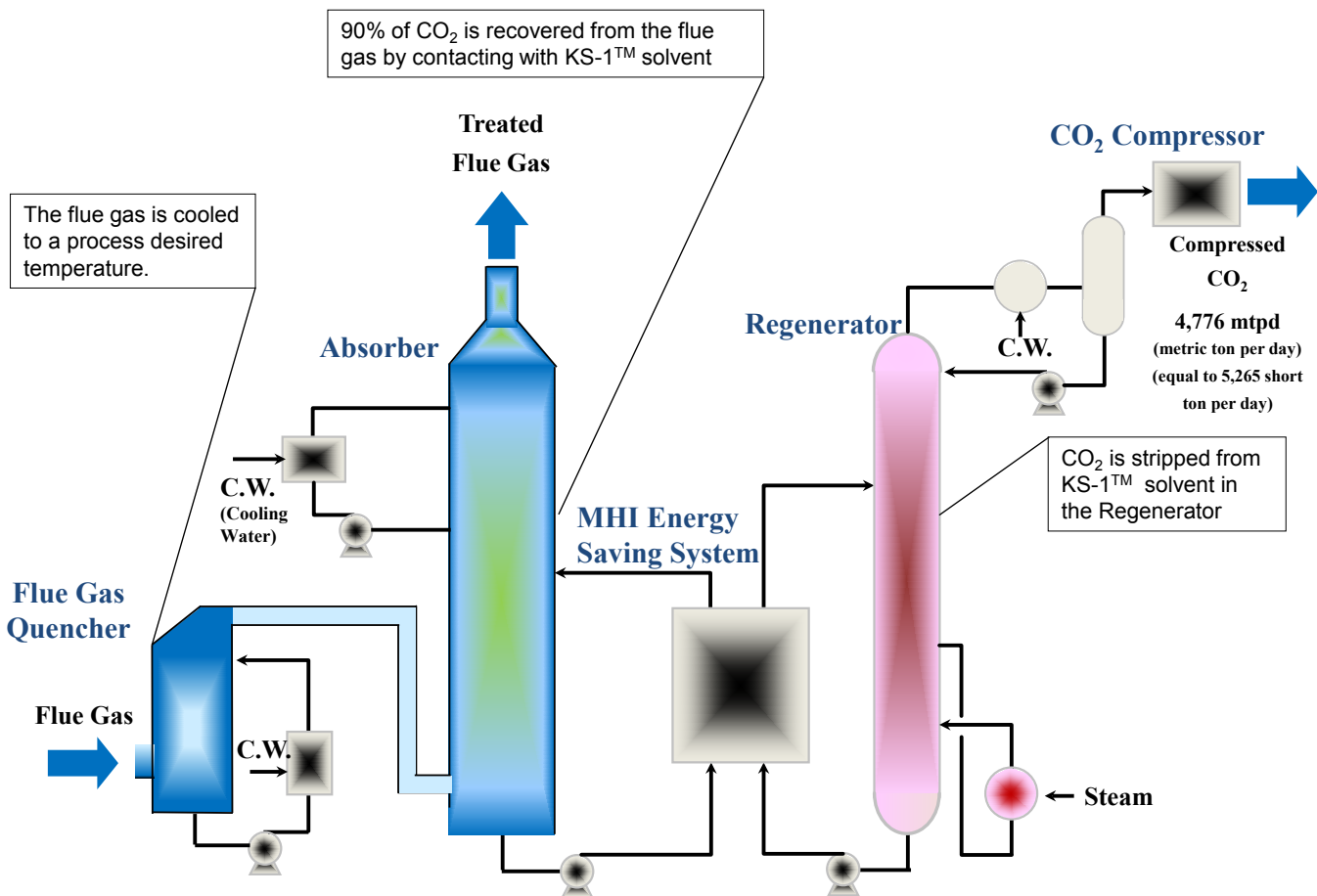
The project has been selected by the United States Department of Energy (DOE) to receive up to \$167 million as part of the Clean Coal

Power Initiative Program (CCPI), a cost-shared collaboration between the federal government and private industry.

The Petra Nova Carbon Capture Project will utilize a proven carbon capture process, which was jointly developed by Mitsubishi Heavy Industries, Ltd. (MHI) and the Kansai Electric Power Co. that uses a high-performance solvent for the CO₂ absorption and desorption.

Captured CO₂ will be used to enhance production at mature oil fields in the Gulf Coast region. The first site to use CO₂ from the WA Parish carbon capture system is Hilcorp's West Ranch Oil Field. Through EOR, it is expected that oil production will be boosted from around 500 barrels per day to approximately 15,000 barrels per day. This field is currently estimated to hold approximately 60 million barrels of oil recoverable from EOR operations. Other sites have been identified, and reservoir analysis is underway.

MHI CO₂ Capture Process (KM CDR Process®)



Coal Fueled Electrical Generation

Coal is America's most abundant fuel resource, currently providing about half of the electricity generated in the U.S., but it is also the most carbon intensive fuel. Approximately 85 percent of U.S. electric sector emissions and 40 percent of total U.S. energy-related CO₂ emissions come from coal plants.

Post-combustion carbon capture is essential so that we can use coal to sustain our energy ecosystem while we begin reducing our carbon footprint.

Monitoring

The project is working closely with the University of Texas to take advantage of the University's world-renowned expertise in CO₂ monitoring. The University of Texas Bureau of Economic Geology, with its globally recognized experience in monitoring enhanced oil recovery and other sequestration methods, will design and manage our carbon monitoring plans.

FOR MORE INFORMATION, CONTACT:

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