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NRG Energy, JX Nippon commission \$1bn Petra Nova carbon capture facility in US

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NRG Energy and JX Nippon Oil & Gas Exploration have constructed and commissioned the \$1bn Petra Nova post-combustion carbon capture facility on an existing coal plant in Texas, US.



The Petra Nova project, which is also known as WA Parish carbon capture system (CCS) project, is said to be the world's largest of its kind. It is equally owned by NRG and JX Nippon.

The system is designed to capture CO2 produced from a 240MW equivalent coal exhaust slipstream at NRG Energy's W A Parish coal-fired generating station Unit 8

in Thompsons, Texas.

The captured CO2 will be used for enhanced oil recovery (EOR) at the West Ranch oil field located on the Gulf Coast of Texas. The field is jointly owned by NRG, JX Nippon and Hilcorp.

In September 2016, the Petra Nova project first captured CO2 and delivered more than 100,000t to the West Ranch field through an 80-mile pipeline.

The project has then undergone successful final performance acceptance testing in December 2016 prior to entering service.

JX Nippon Oil & Gas Exploration president and CEO Shunsaku Miyake said: "We believe this project will contribute to significantly increasing incremental crude oil production from legacy oil fields and also will be a major step forward in helping to decrease CO2 emissions globally."

The Petra Nova CCS project features proprietary KS-1 high-performance solvent for the CO2 absorption and desorption. It also uses the KM-CDR Process, which is jointly developed by Mitsubishi Heavy Industries (MHI) and the Kansai Electric Power.

NRG Energy expects the oil production from the field to increase from approximately 300 barrels per day before beginning Enhanced Oil Recovery (EOR) operations to up to 15,000 barrels per day using captured CO2 over the next few years.

Both Hilcorp, along with the University Of Texas Bureau Of Economic Geology, will monitor the CO2 movement deep in the oil reservoir.

Image: The Petra Nova post-combustion carbon capture system in the US is said world's largest of its kind. Photo: courtesy of Business Wire/NRG Energy, Inc.

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