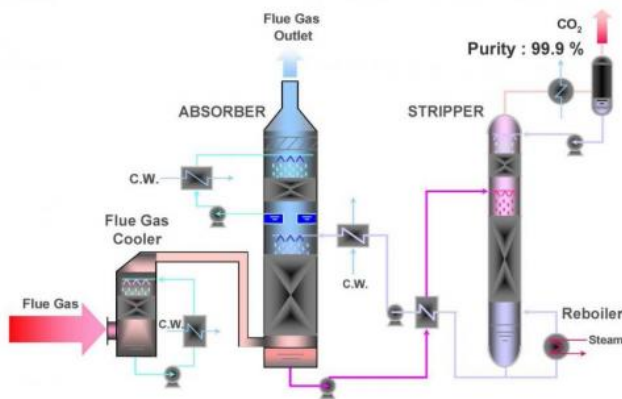


# Construction begins on largest carbon capture project for an existing coal plant to date

18 July 2014, by Bob Yirka



The U.S. Department of Energy along with NRG Energy and JX Nippon, has [announced](#) that construction has begun on a post-combustion carbon capture project in Texas. The project will seek to capture approximately 90 percent of carbon dioxide emissions from a coal fired power plant, preventing it from being released into the atmosphere. The carbon dioxide that is recovered will be used to help retrieve more oil from a nearby well.

Carbon capture and sequestration has been in the news of late as efforts to use renewable (non carbon releasing) resources to generate electricity have not proven to be financially feasible on a large scale in many areas—for that reason, power companies have begun putting research funds into finding ways to prevent carbon dioxide from being emitted by existing and new [coal fired power plants](#)

The new project in Texas, officially called the [Petra Nova Carbon Capture Project](#), will use technology

that has been developed jointly by Mitsubishi Heavy Industries and the Kansai Electric Power. The process involves using chemical solvents called amines to absorb the carbon dioxide from emissions. A secondary process (using steam) then de-couples the carbon dioxide from the amines and sends it via pipe to another facility. The new plant is projected to remove 1.6 million tons of carbon dioxide each year from the emissions of a single coal fired plant and is being described as the largest of its kind in the world.

But there is more to the story, the plant that recovers the carbon dioxide will need power itself—the plan is to install a natural gas turbine, which of course will emit carbon dioxide, thus, while the plant will technically remove 90 percent of the carbon dioxide that is emitted by the [coal fired](#) plant, it will itself emit approximately 785,000 tons of carbon dioxide per year cutting into the net decrease of the overall project. There is also the issue of how the carbon dioxide will be used—it will be injected into the ground beneath a nearby underperforming oil well. The pressure caused by the injection of the carbon dioxide will allow for recovering more oil from the well, which will of course be used as a power source, by burning it, thus releasing carbon dioxide into the atmosphere. The injected [carbon dioxide](#) will remain sequestered in the ground.

The Petra Nova Carbon Capture plant is projected to be operational by 2016.

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APA citation: Construction begins on largest carbon capture project for an existing coal plant to date (2014, July 18) retrieved 29 January 2022 from <https://techxplore.com/news/2014-07-largest-carbon-capture-coal-date.html>

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