

# Decarbonization efforts across the NRG fleet

NRG FACT SHEET  
CARBON CAPTURE

In 2014, we accelerated our mission to create a sustainable energy future by setting unprecedented goals: to cut our CO<sub>2</sub> emissions 50 percent by 2030 and 90 percent by 2050 from a 2014 baseline. Since then, we've been busy – very busy – delivering on that promise. Here are just a few ways we reduce carbon emissions at NRG generation facilities across the country.

## Carbon capture

The Petra Nova project, which began operations on budget and on schedule in 2016, is post-combustion carbon capture done right. First, the project captures up to 90 percent of the CO<sub>2</sub> from a slipstream of flue gas at our WA Parish Generating Station southwest of Houston, Texas. Then, the captured CO<sub>2</sub> gets pumped to the West Ranch oil field 80 miles away, where it increases oil production through enhanced oil recovery.

In parallel with the Petra Nova project, we partnered with COSIA and XPRIZE to create the NRG COSIA Carbon XPRIZE. The four-year, \$20 million competition challenges the world's brightest minds to turn CO<sub>2</sub> emitted by power plants into valuable products such as building materials, alternative fuels and consumer goods. This is just one way we stay on top of the dynamic landscape of emerging carbon abatement solutions.

## Coal-to-gas conversions

Converting coal-fired units to use natural gas is a win-win. It cuts carbon emissions nearly in half, and it's a relatively inexpensive endeavor.

We've converted coal units at our Big Cajun II plant in Louisiana, our New Castle and Shawville plants in Pennsylvania and our Joliet plant in Illinois. Together, these conversions generate 2,788 megawatts of cleaner, more flexible power.

## Repowering

We reduce emissions and increase efficiency at older plants by replacing and repowering them with flexible combustion turbine technology. These turbines come online in minutes instead of the typical 12 to 24 hours, allowing units to generate power (and emissions) only when needed to meet customer demand.

The turbines also help us better integrate renewable generation technologies such as solar and wind, which produce power only when the sun shines or the wind blows.

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