LOUISIANA DEPARTMENT OF
CONSERVATION AND ENERGY

CARBON SEQUESTRATION

FREQUENTLY ASKED QUESTIONS

What is carbon sequestration and who manages it?

Carbon sequestration is the permanent disposal of carbon dioxide underground by means of injection wells, known as Class VI wells, managed through the Department of Conservation and Energy (C&E) Office of Permitting and Compliance – Engineering Division.

Has this technology been done before in Louisiana?

While large-scale carbon sequestration projects are new to Louisiana, operators and regulators already have expertise with the components that make up the overall process.

- Underground injection has been ongoing for generations, and the state has been enforcing injection regulations on behalf on the EPA since the 1980's.
- C&E has overseen CO_2 injection in enhanced oil recovery (EOR) projects for many years – injecting CO_2 into depleted oil reservoirs to increase production.
- C&E provides regulatory experience in dealing with CO_2 wells, underground behavior, and pipelines.
- C&E also handles long-term underground storage of gases.

How does the CO_2 stay underground?

- C&E requires there be an impermeable layer (such as clay or shale) of sufficient thickness to prevent upward movement of the CO_2 – the core of the program is drinking water protection.
- Additionally, the well must be constructed of materials resistant to carbonic acid. Pre-existing wells must also be made safe against the CO_2, carbonic acid, and pressure.

How do you know where the CO_2 is once it's underground?

Tracking the CO_2 plume is one of the most important parts of such projects – applicants are required to provide detailed modeling beforehand, and to conduct monitoring through special wells within and above the injection zone to ensure the plume is behaving as predicted.

Will it be injected into groundwater and will my water be affected?

No. The saline layers where CO_2 is injected are deep rock formations, usually thousands of feet deeper than the freshwater aquifers that we get our drinking water from.

What are the hazards of CO_2?

- CO_2 is not classified as toxic or carcinogenic.
- The primary risk to human safety is if enough CO_2 gathers in one place to displace breathable air.

Are Class VI injection and injecting CO_2 for enhanced oil recovery (EOR) the same thing?

- No. Both the rules and the actual activities are very different – Class VI rules are vastly more stringent than the Class II rules involved in EOR.
- Louisiana's Class VI rules for safety and environmental are the most stringent in the country, even surpassing those of the EPA.