

What is Carbon Capture?

- Carbon Capture and Storage or “CCS” is a vital technology that combats climate change by removing CO₂ from the air and permanently storing it thousands of feet underground.
- Calpine is a champion for CCS and supports policies incentivizing the technology. We can deploy CCS to reduce CO₂ while ensuring a reliable supply of electricity and protecting and creating thousands of high paying jobs.

The Steps



Step 1

Capture technology removes carbon dioxide emissions from industrial processes and the air. Capture equipment can be retrofitted to existing facilities or built into new facilities.



Step 2

Captured CO₂ is transported from the emissions source to appropriate geologic formations.



Step 3

The captured carbon is injected thousands of feet underground, where it is safely and permanently stored under layers of impermeable rock where it mineralizes and becomes rock.

Our Baytown Carbon Capture Project:

Located in Baytown, Texas, the Baytown Energy Center is being actively assessed for a carbon capture project designed to capture 95% or more of CO₂ emissions from turbines and auxiliary boilers at this facility. Located less than 10 miles from Calpine’s Deer Park Energy Center, this facility is near significant CO₂ storage resources along the Texas Gulf Coast. As a combined heat and power generation facility, carbon capture at this facility will enable it to provide low-carbon industrial heat to co-located facilities and low-carbon power to the Texas grid.

More Details:

- About 450 megawatts of low-carbon power and steam.
 - Enough to power more than 296,000 homes.
- Up to ~2MTPA in CO₂ offsets.
 - Equivalent to removing 430,938 cars from the road annually.
- FEED (Front End Engineering Design) study, permitting and preliminary development underway.
- Close to 150 gigatons (330 trillion pounds) of CO₂ carbon storage capacity in the Gulf Coast of Texas that can store the carbon dioxide safely and securely, permanently preventing it from entering the atmosphere ancontributing to climate change.
 - Enough storage for the annual emissions of 40,150 coal-fired power plants.
- Supplies the adjacent Covestro complex with electricity and steam, as well as added power for the Texas grid.
- Potential employment benefits include 1.5 million construction hours (about 250 full-time employees for 3 years) in addition to 25-30 full-time, high-paying clean energy power plant jobs.



~2 million CO₂ Captured