PROJECT ENTERPRISE AT CALPINE LMEC

What is Project Enterprise at Calpine LMEC and its goals?

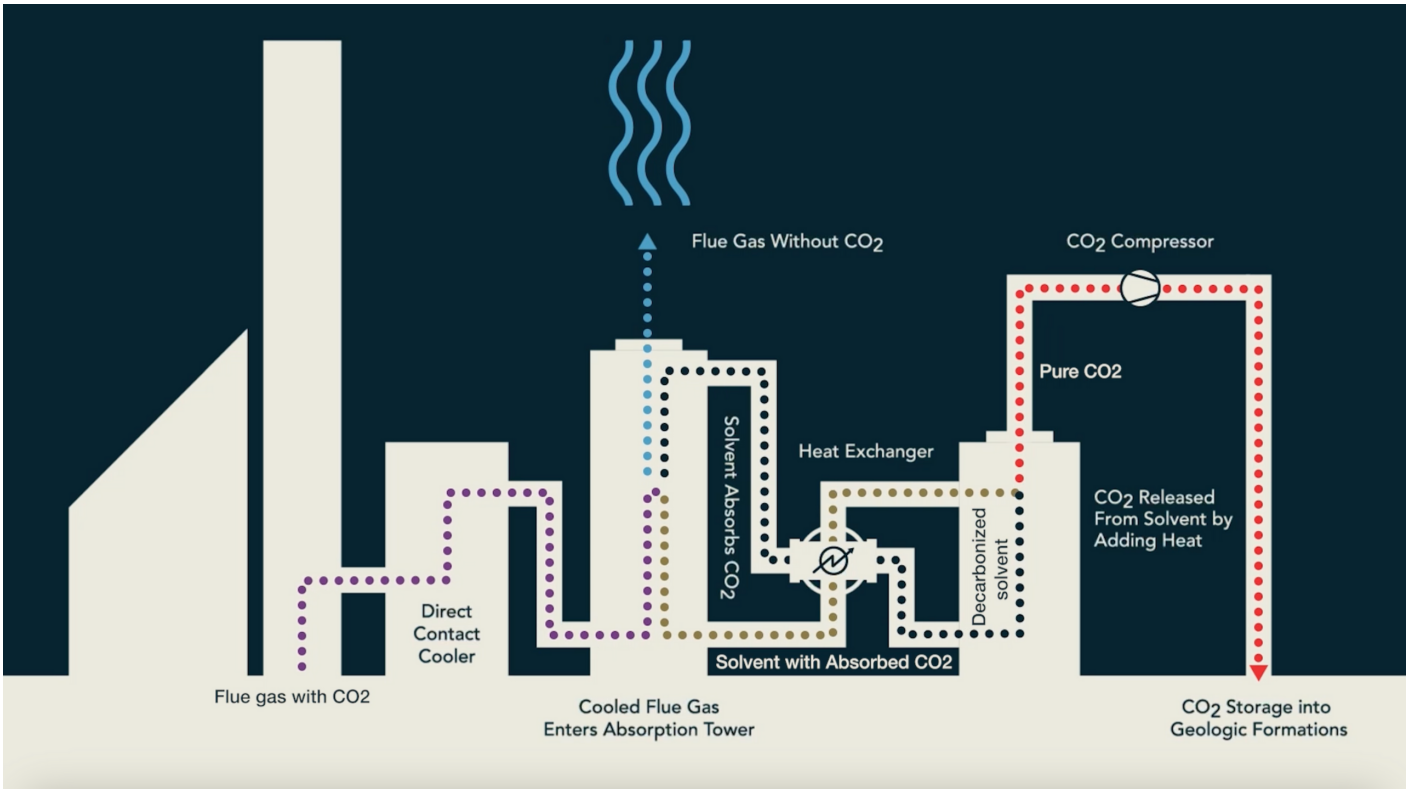
The innovative Project Enterprise is a Carbon Capture demonstration pilot that will advance technology designed to create a cleaner, more sustainable energy production system. The demonstration pilot, manufactured in the U.S. and constructed using union labor, will test ION Clean Energy's transformational carbon dioxide capture technology adjacent to Los Medanos Energy Center, an existing natural gas power facility, and is a significant step towards achieving the state's net-zero greenhouse gas emission goals by 2045.

Where will the Project Enterprise pilot be held?

The Department of Energy funded Enterprise carbon capture demonstration pilot will be unveiled at the Los Medanos Energy Center on July 14th, 2023.

How long is the demonstration pilot?

Over the next 18 months, the program will test and monitor emissions, and track operational requirements to scale ION's ICE-31 solvent technology.



ION Clean Energy Carbon Capture Technology

PROJECT ENTERPRISE AT CALPINE LMEC

What is the significance of the Project Enterprise at Calpine LMEC?

Project Enterprise will utilize solvent-based technology developed and designed by U.S.-based ION Clean Energy. The success of the demonstration would validate the technology for commercial scale deployment in California and demonstrate it as a viable location for further Department of Energy funding to build and operate a commercial scale carbon capture project.

How is the demonstration being funded?

As part of the Biden-Harris Administration's goal to achieve carbon neutrality by 2050 and a 100% clean electricity sector by 2035. The $25M Enterprise Project is funded as a DOE-NETL Cooperative Agreement with the cost share provided by ION and Calpine.

Who are the Project Enterprise partners?

Calpine has partnered with ION Clean Energy, an industry leader in carbon capture technologies. The project will utilize ION Clean Energy's proprietary solvent-based technology that captures more than 95% of carbon from power plant emissions.

Los Medanos Energy Center | Pittsburg, California

CARBON CAPTURE & STORAGE

What is Carbon Capture & Storage (CCS)?

First introduced around 1972, Carbon Capture & Storage, also referred to as “carbon capture,” is a proven technology that minimizes the effects of global warming. Once CO_2 emissions are captured and transported, pressurized CO_2 is piped for underground storage in deep rock formations. The CO_2 becomes trapped in the pore spaces of the rock formations, thousands of feet underneath impermeable rock. Over time, the CO_2 may be transformed into solid minerals.

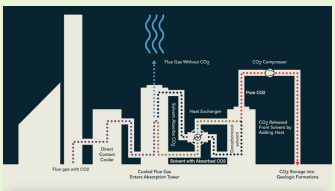
Is CCS safe?

CCS technologies have been successfully demonstrated for decades as safe and reliable approaches to reducing greenhouse gas emissions. These technologies are being safely deployed at multiple locations across the world today and are reducing emissions in increasingly cost-effective and innovative ways. Sites used for carbon capture are geologically and seismically stable and must be approved by the Environmental Protection Agency (EPA) before CO_2 injection begins. Calpine must adhere to a rigorous set of criteria set by the EPA to receive approval for use.

Why is CCS important?

Advancements in CCS technology are integral to achieving both the State and Biden-Harris Administration’s climate goals of carbon neutrality by 2045 and 2050, respectively. New technologies are being introduced to divert a higher percentage of carbon dioxide emissions from entering the atmosphere, and California has enormous potential to advance carbon capture as a part of the larger, multi-faceted portfolio of proven technologies to address climate change.

STEP 1: CARBON CAPTURE



Carbon capture technology, which can be added to existing facilities, capturing CO_2 emissions.

STEP 2: TRANSPORTATION

The captured CO_2 is transported from the emissions source to geologically stable formations.

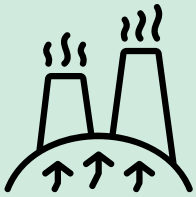
STEP 3: STORAGE

The captured CO2 is stored underground, where it will remain sequestered.

ABOUT | Calpine

Calpine is the **nation's largest generator of electricity from natural gas and geothermal resources** with robust commercial, industrial and residential retail operations. Founded over 40 years ago on the principles of sustainability, Calpine remains focused on our commitment to clean energy production.

- Calpine serves customers in 23 states, Canada and Mexico
- Largest geothermal power producer in the world

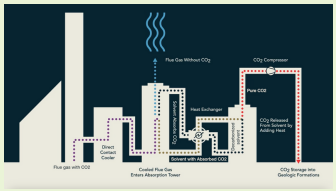


- Largest NGCC and CoGen fleet in the US
- More than 2,300 employees

What is Carbon Capture & Storage?

Carbon Capture & Storage is a **proven method** of capturing CO_2 and storing it safely and permanently thousands of feet underground.

STEP 1: CARBON CAPTURE



Carbon capture technology, which can be added to existing facilities, capturing CO2 emissions.

STEP 2: TRANSPORTATION

The captured CO2 is transported from the emissions source to geologically stable formations.

STEP 3: STORAGE

The captured CO2 is stored underground, where it will remain sequestered.

Geologic Storage of CO2 is Effective.

- Carbon capture technologies have been **safely** and **successfully** practiced for decades, with dozens of carbon capture projects currently operating across the world.
- Once carbon is sequestered in suitable geological formations, the risk of leakage is extremely low and diminishes over time.
- Carbon Sequestration projects are subject to and regulated under the **rigorous requirements of U.S. Environmental Protection Agency.**

ABOUT | Project Enterprise at Calpine LMEC

In partnership with ION Clean Energy, Calpine is actualizing the Project Enterprise demonstration pilot, which will advance Carbon Capture technology designed to create a cleaner, more sustainable energy production system. The pilot will utilize U.S.-based ION Clean Energy's new solvent-based technology that has the potential to reduce carbon emissions by greater than 95% for existing natural gas power stations.

What is the significance of the demonstration pilot?

The pilot will test a **transformational carbon dioxide capture technology** added to Los Medanos Energy Center, an existing natural gas power facility. The success of the demonstration will validate **California as a suitable and viable location** for additional Department of Energy funding to build and operate carbon capture. Installing carbon capture technology in California is essential to meeting California's goals of **eliminating greenhouse gas emissions by 2045 without compromising reliability**.

Los Medanos Energy Center | Pittsburg, California

The demonstration pilot:

- Will inform future CCS infrastructure investments that enable Calpine to maximize the clean, reliable production of electricity for California
- Is manufactured in the U.S. and constructed using union labor
- Creates quality, high-paying jobs in the local community