

PROJECT OVERVIEW

Carbon capture and storage from Callide A Power Station

Project Overview

CS Energy has joined industry and research partners to investigate the feasibility of a clean coal technology for capturing carbon dioxide from the Callide Power Station and storing it underground.

Carbon dioxide is the main gas associated with climate change and today, coal fired power stations account for a significant proportion of man-made carbon dioxide in the world.

The carbon capture and storage project currently underway at the Callide A Power Station has two parts:

1. The Oxy-fuel Project at the power station to capture carbon dioxide from the waste gases.
2. Transport, injection and storage of the carbon dioxide deep underground in the Dennison Trough formation 350 km west of the Callide Power Station.

What is the Oxy-fuel Project?

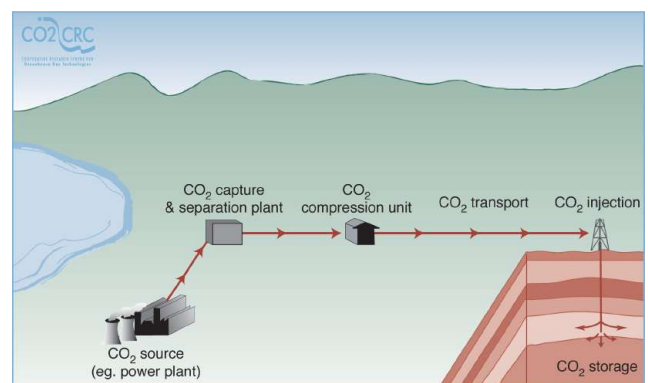
The Oxy-fuel process being demonstrated at the Callide A Power Station involves firing a conventional coal fired boiler in a mixture of oxygen and recycled flue gas ($O_2 + CO_2$) instead of air ($O_2 + N_2$). This produces a concentrated stream of carbon dioxide suitable for capture, transport and storage. This process also leads to significant reductions in other power station emissions such as oxides of nitrogen and sulfur.

What is carbon capture and storage?

Carbon capture involves removal of CO_2 from the waste gases of the power plant. The CO_2 can then be transported and injected deep underground into stable geological. This process, also referred to as geosequestration, has the potential to dramatically reduce greenhouse gas emissions.

This process, also referred to as geosequestration, has been used by nature for millions of years to trap oil and gas underground, and the technology has been used since the late 1970s by the oil and gas industry.

The process is graphically represented below.



Who is responsible for this project?

CS Energy has partnered with a Japanese consortium comprising JCoal, JPower and IHI; the Australian Coal Association and Xstrata Coal; Schlumberger – a world leader in geosequestration technology; and the CO2CRC and CRC for coal in Sustainable Development.

This project has also applied for funding from the Australian Government's Low Emissions Technology Development Fund.

Project timeframe

A 5 year technology demonstration is planned following completion of the detailed design phase in mid 2007.

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