



Capturing Carbon

CO₂ Capture through mineralisation

To help meet our carbon targets we need to encourage the entry of renewable sources of gas like biomethane into our network – along with gas from other distributed sources.

This will also help reduce future dependency on fossil fuel while using an existing energy infrastructure. However, to meet regulatory and commercial specifications, there is a need for acid gas removal (AGR) from the gas before distribution.

Existing AGR process equipment is expensive, large and energy intensive, and vents the scrubbed CO₂ directly to the atmosphere. Venting of 30% CO₂ is equivalent to increasing gas combustion emissions by 43%.

So if renewable gas is going to help us meet our carbon targets we need to find an alternative process.

The technology can offer a better alternative to conventional amine scrubbers for gas processing, and has potential to open up the distributed gas market.



**YOUR GAS EMERGENCY
AND PIPELINE SERVICE**



Key Benefits

- Improving the AGR process will enable biomethane and other renewable and distributed sources of gas to further contribute to meeting our carbon targets.
- The project successfully demonstrated that Cambridge Carbon Capture's (CCC) CO₂ scrubbing technology can permanently, safely and cheaply remove CO₂ in the proof of concept validation.
- New sources of gas will be geographically varied and therefore the learning generated by this project is beneficial to all gas networks.
- Current CO₂ separation systems are very expensive and can make connection of smaller distributed sources of gas to gas networks uneconomic. This new process may allow for a cheaper alternative.



Next Steps

- Development of a further project phase that may include.
 - A containerised 'first of kind' CCC process plant for use at a distributed source of gas site.
 - Further analysis to find out if the process can strip out other contaminants commonly found in renewable and distributed gas sources and that the resulting by-products are environmentally safe.
 - Development of a pilot demonstrator capable of long-term unmanned operation able to process meaningful quantities of gas at an example site.

