

# Methane Capture Projects

## Rhine-Ruhr Waste Gas Power Project

This project captures methane from three abandoned coal mines in Germany. Methane is 21 times more potent than CO<sub>2</sub> as a greenhouse gas. The project will generate emission reductions of 385,500 tCO<sub>2</sub> equivalent in 2006 and 2007.

### Technology partner

Stadtwerke Herne AG and Mingas-Power GmbH

### Country

Germany

## About your project

### Methane Capture Projects, Germany

This 'project' is actually three projects all focused on the same activity, they are located in the Rhine and Ruhr valleys in Germany, a region with an extensive coal mining history dating back over 100 years. Since the 1960s, demand for coal has declined and many mines have been closed. Even after closure, methane continues to escape through open shafts and cracks for many years.

Methane is originally formed with the coal and is stored in large quantities within coal seams. As coal is mined, rock fractures and methane is released. When coal mines are closed, there are no legal requirements to install methane abatement technology and the mines continue to vent methane into the atmosphere. This project will capture the methane that would otherwise escape from the three mines and use it to generate electricity and heat: Combined Heat and Power (CHP) units feed electricity to the grid and heat to a local district heating system. Burning one molecule of methane produces two molecules of water and one molecule of CO<sub>2</sub>, so combusting methane in CHP units reduces its climate impact by 21 times.

The project obtains income from the sale of electricity and heat, which alone would not provide an economic return. This is where funds generated from climate change programmes organised by The CarbonNeutral Company are useful – the sale of carbon credits from the project makes the activity financial viable and brings about benefit to the environment that would otherwise not occur.

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