

# TREATING BIOFOULING IN BIOGAS UPGRADING PLANTS USING KLAROLAKS

## CASE STUDY: BIOGAS PLANT OPERATOR

### GAS SCRUBBERS

Pressurised water-wash biogas upgrading plants offer a simple, cost-effective and reliable solution for purifying biogas to biomethane.

The process separates biomethane from carbon dioxide and hydrogen sulphide in large gas scrubber towers.

Once dried, the biomethane is ready to be used as a vehicle fuel or can be injected into the gas grid.

### ISSUE

A biogas plant in the south of England operates a pressurised water-wash biogas upgrading plant producing 900 m<sup>3</sup> per hour of biomethane.

Due to biofouling, the biogas plant was experiencing a loss of performance in their gas scrubber tower resulting in the need to caustic clean the tower every six weeks. The decline in performance was evident two weeks before each scheduled clean, and at the point of cleaning up to 25% of biomethane production was being lost.

The shutdown required for the clean could take up to 8 hours. This resulted in a complete loss of biomethane injection during this period. After the caustic clean it could take up to 24 hours to restore the optimum performance of the gas scrubber.

## SOLUTION

Klarolaks is a ready-to-use liquid chemical developed specifically for use in water-wash gas scrubbers.

When mixed with water, Klarolaks quickly eliminates micro-organisms and destroys biofilm.

The purpose of the trial was to establish if biofouling in the gas scrubber could be significantly reduced or even eliminated.

The trial demonstrated conclusively that Klarolaks extended the time between caustic cleans from six weeks to four months, or three per year instead of eight.

During the trial no adverse impacts on biomethane gas quality was observed.

Along with the environmental and safety benefits, the use of Klarolaks demonstrated increased biomethane production, plant efficiency and profitability.

The operating company was so impressed that they immediately implemented Klarolaks as the solution to their biofouling issue in the gas scrubber and have included it in their daily maintenance programme.

## KLAROLAKS BENEFITS



Dramatically  
increased time  
between caustic  
cleans



Significant  
reduction in  
biomethane loss



Increased  
profitability