

Biogas opportunities

We recognise that, to achieve the dramatic reductions in emissions we've set, we will need new low energy approaches to how we operate our business. Gaining more value from 'biogas', a by-product of the sludge treatment process, is one opportunity we are exploring.

Sludge from wastewater treatment processes is a valuable resource. Not only can it be used as a soil conditioner but it can be used to produce gas which can be used to generate electricity. We are now looking into ways of getting even more benefit from this gas by using it to power vehicles or injecting it into the national gas grid.

To use the gas for vehicle fuel the first step is to enhance the methane content by removing carbon dioxide, moisture and other small impurities. The bio-methane is then compressed, stored and will be used to run sludge tankers. Tests have shown that a tanker running on bio-methane could save up to 60 tonnes of carbon dioxide emissions per year compared to a diesel tanker. This is equivalent to the energy use of 200,000 miles of car journeys. It reduces running costs, the tanker engine is much quieter and it emits lower levels of emissions compared to a standard diesel engine.

We have applied for funding from WRAP (Waste & Resources Action Programme) to help us buy the equipment we need to produce the bio-methane. If we're successful, we will set up a filling station at our Davyhulme Wastewater Treatment Works and convert 24 of the tankers which visit the site to run on the bio-methane. To test the credentials of trucks running on gas we have already converted one of our tankers to run on dual fuel – which means it runs on both diesel and natural gas.

National Grid are also keen on our gas enhancements as it could result in the gas being injected to the gas grid to supply homes and businesses. To this end we have set up a partnership with them on a joint grant submission.