



## Biogas – a fact sheet

The new m1 Metrobus route, operated by Bristol Community Transport, will be run with buses fuelled by biogas. But what is biogas and why have we chosen it for our vehicles?

### What is biogas?

Biogas is just like the regular gas that many families use for cooking and central heating – methane. The difference is in where the gas comes from and what that means for the environment.

Regular gas is a non-renewable fossil fuel, mostly extracted by drilling. It's also a greenhouse gas, contributing to climate change.

Biogas is different. Biogas is generated from waste, like food peelings or manure. The waste is put into a machine called a digester, where it is broken down by bacteria, producing gas. The gas is then purified and fed into the National Gas Grid as biomethane. We then buy the biogas from the producers, using a certification process to ensure we are buying their production, not someone else's.

### If biogas is the same thing as regular gas, how is it greener?

There are two big environmental advantages to using biogas:

**Methane release:** The waste used to make biogas would be broken down by bacteria anyway over a period of time, releasing the methane gas into the atmosphere. Methane has twenty-one times the impact of CO<sub>2</sub> on climate change, so capturing the gas and using it to run buses, whose engines convert it into CO<sub>2</sub>, makes a real difference.

**Renewable and carbon neutral:** The buses have to run on something, so using a renewable form of energy means that we are not using fossil fuels. Also, because the material used to make biogas took in carbon (before it ended up as waste), the whole process is considered carbon neutral. It's a bit like planting a tree, using the tree for energy and then planting another tree.

### How do gas buses work?

Gas buses work in a very similar way to a regular car or bus – it's just the fuel that's different. In fact, there are nearly 25 million gas-powered vehicles of different types all over the world. One thing that is different is the level of emissions. Because methane turns into water and carbon dioxide when it is used as a fuel, the level of polluting emissions is very low when compared to a diesel bus – gas buses operate at the very high Euro VI standard and are classed by the Government as a low emission vehicle.



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## **How are our gas buses going to be fuelled?**

We'll be taking our gas supply from the mains. It will then be compressed and stored at our depot. This means we don't have the disruption of having fuel delivered by tanker. Each bus will then be refilled at our new refuelling station, built to the highest standards. It takes about as long as filling up a regular bus.

## **How safe is gas storage?**

Very safe. Our storage uses the very latest engineering technology that applies the strictest safety and construction standards. Our supplier is the Gas Bus Alliance, the leaders in the supply of biomethane and in the design and build of gas fuelling stations for the UK bus industry. To date they have built and expanded 5 gas stations in the last 4 years – all supplied with 100% certified carbon neutral biomethane.