

New street light runs on dog waste

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Credit: HONG SON from Pexels

Turning human and animal waste from problem to energy source is not new, animal dung has been used as fuel since the neolithic period. But a pilot project is showing dog poo can be used to fuel street lighting.

Our streets need less dog poo and greener ways of fueling [street lighting](#),

so why not use one to do the other? We've been getting flammable gas from decaying organic matter since the 17th century; now funding from the Malvern Hills Area of Outstanding Natural Beauty has helped inventor Brian Harper develop the UK's first dog poo-fuelled street light. The idea, as the Guardian newspaper reports, seems simple enough, "(...) dog walkers deposit the product of a hearty walk into a hatch and turn a handle. The contents are then broken down by microorganisms in the anaerobic digester, producing methane to fuel the light, and fertiliser."

Harper told the paper that he'd grown tired of seeing little bags used by owners to clean up after their [dogs](#), dropped by the side of the road, so he decided to do something about it. It took three years to develop, but now the lamp-post lights up the nearby ridge of the Malvern hills, at its base is a green box, a cross between a washing machine and a weather station. He estimates 10 bags of poo can fuel the light for two hours.

"The gas light captures people's imagination and shows them dog poo has a value," Harper told the Guardian. "As a result, we get it [poo] off the ground, into a receptacle, and producing something useful." The next step is to try to interest managers of urban parks in the technology.

Small-scale anaerobic digesters are commonplace in many developing countries and larger plants producing heat and electricity from animal manure and human sewage have long been used in the west. Yet the energy in most excrement still goes to waste. The Guardian explains greater exploitation of this most plentiful resource has been held back by the availability of artificially cheap fossil fuel. Harper is at the head of a new movement of innovators finding ingenious, sustainable ways of harnessing the power of excrement.

In Bristol, UK, GENeco, a subsidiary of Wessex Water, ran its famous Bio-Bug trial in which a VW Beetle was converted to run on methane

extracted from human waste. Capable of running for 300km on a full tank, it produces significantly less carbon dioxide and air pollution than fossil fuel-powered equivalents. It ran in trials between Bath and Bristol Airport and then, naturally for English speakers, on Bristol's "Number 2" bus route. The use of biomethane from sewage plants to power cars is more widespread in other countries, such as Sweden.

Meanwhile over in Canada, authorities are thinking along the same lines as Harper. In Waterloo, Ontario, dog owners walking their pets in local parks are being asked to collect the waste and put it into concrete storage units. These are emptied and the contents used in a large, central plant to form methane. "Collecting dog waste separately prevents it contaminating our recycling streams, allowing us to divert it away from our landfill sites," says Jeff Silcox-Childs, Waterloo's director of environment and parks.

Provided by CORDIS

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