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Flushed with enthusiasm, Severn Trent sees light at the end of the tunnel for its new revenue plan

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One of Britain's largest water companies is planning to convert waste piped from millions of British homes into fuel that could be sold to power companies.

Severn Trent, which supplies water and waste services to 3.7 million households, already generates nearly 17 per cent of the electricity that it consumes by burning sewage gas, or methane, collected from its network of sewage plants across the Midlands and mid-Wales.

Tony Wray, Severn Trent's chief executive, told *The Times* that the in-house scheme was the first step in a programme to develop raw sewage sludge into pellet fuel for burning in power plants, which are being offered subsidies to switch to environmentally friendly biomass alternatives to coal and natural gas.

Since 2003, Renewables Obligation Certificates — a form of subsidy to accredited generators — have been available for electricity that is generated by burning biomass fuels, which include wood, straw or sewage gas and sludge.

“Sludge has half the calorific content of brown coal, so this is a very viable fuel,” Mr Wray said. “The trick is to find new ways to dry it. Wet sludge is not very economical to use.”

Severn Trent is working with the European Bioenergy Research Institute at Aston University in Birmingham to develop a system using a chemical process known as pyrolysis, which would effectively bake sludge into a form that could be used to produce heat and electricity. Mr Wray said that initially Severn Trent would test the fuel but ultimately could sell it to utilities, creating a new revenue stream.

Water groups are under growing pressure to find new uses for more than one million tonnes of sewage sludge that is produced in the UK every year. Before 1998, much of the waste was dumped at sea or in landfill sites, but sea disposal is now banned under European Union law, while landfill has become an increasingly expensive option because of higher taxes and stricter government controls. This year, landfill tax is set to increase by 20 per cent to £40 per tonne, up from £32 in 2008. Next year, it is set to rise again to £48 per tonne.

Severn Trent utilises sewage gas to fuel 53 separate heat and power generation units at 35 of its sites. For example, at Minworth sewage treatment

works near Birmingham, Severn Trent generates an average of 9.5 megawatts of electricity — enough to provide power for about 18,000 homes.

The British water industry has spent almost £500million developing new ways to treat and manage sewage, according to Severn Trent.

About 347,000km of sewers collect more than 11billion litres of waste water in the UK every day. This water is treated at about 9,000 sewage treatment works across the country. Roughly 62 per cent of the country's sludge is treated and recycled into a type of fertiliser known as biosolids, which is used to fertilise more than 80,000 hectares of British farming land every year.

While there is growing interest in the use of waste for fuel, it is not unprecedented. In the Thirties, sewage gas was used to power public transport systems in some German cities, including Essen and Munich.

Severn Trent, which also generates some electricity from hydro-electric turbines, which are installed on three of its large reservoirs, wants to generate 30 per cent of its electricity from renewable sources by 2013.