Thermal Hydrolysis Process.
We provide the essential service that’s at the heart of daily life, health and enjoyment, to over 14 million customers across London and the Thames Valley - and we aim to do this in the most sustainable way. Striking a balance, doing the right thing for people, for the performance of our business and for the natural environment – this is what being more sustainability means to us.

**Background.**
Sewage sludge is a source of renewable fuel or biogas which we use to generate renewable energy. This helps reduce our energy costs but also helps reduce our GHG emissions.

We already produce around 15% of the electricity we use renewably but there is more we can do. One of the ways we have been working on is to extract more biogas from sewage sludge using the Thermal Hydrolysis process or THP.

**How it works.**
THP works essentially as a pressure cooker where we introduce sludge into THP reactors for 30 minutes at 165°C and at high pressure (6bar). The benefit of the process is that it breaks down the organic matter of the sludge into smaller and more accessible (digestible) compounds for microbes inside the anaerobic digesters. These microbes are responsible for producing biogas and work much more readily, producing more biogas, if their food has been previously broken down to become more accessible.

A traditional anaerobic digestion facility generates about 0.75MWh for every tonne of dry sewage sludge treated (MWh/tDS). THP allows us to increase generation by 33 percent to 1 MWh/tDS. The biogas produced is renewable fuel for Combined Heat and Power (CHP) engines.

In addition to the renewable energy benefits of pre-treating sewage sludge with THP it also reduces the amount of treated sludge which needs to be beneficially disposed of and the cost of doing so it’s a win, win, win.

**Increasing THP capacity.**
We recognize the role that THP will have in making our business more sustainable and that’s why between 2010-2015 we delivered new THPs at Oxford, Riverside, Beckton, Crossness, Long Reach and Crawley sewage treatment works. We’re continuing to invest and by 2020 we will deliver an additional THP at Basingstoke and expand the existing one at Crossness STW.