



United Utilities is the UK's largest listed water company, covering the North Western counties of Cumbria, Cheshire, Greater Manchester, Lancashire and Merseyside. They are responsible for supplying three million households and 200,000 businesses with clean, clear water, and then removing it. This is by any definition a major undertaking, and it requires a substantial amount of energy.

United Utilities are committed to reducing their reliance on fossil fuel derived electricity by running equipment more efficiently and by generating as much renewable energy as possible. As part of this drive, they sought approval for the installation of an EWT DW54-500kW wind turbine at their waste water treatment works site in Fleetwood, Lancashire. Operational since September 2015, the EWT turbine has enabled the Fleetwood water works to operate in a more sustainable manner, as well as providing a buffer against fluctuating energy prices and interruptions in supply.



EWT Fleetwood Case Study

In 2012 United Utilities began investigating ways to reduce their electricity bills and offset power used from the grid. From this came the realisation that energy was the company's second biggest operating cost, only exceeded by staff wages. This kick started a substantial investment programme to develop on-site, renewable energy assets in suitable locations – of which the EWT turbine at Fleetwood is an important part. United Utilities expects that by 2020 they will be generating up to 200GWh of electricity from renewable sources. One major advantage of the investment programme is that because United Utilities is able to decrease their operating costs, their customers will be able to enjoy cheaper bills too.

As well as reducing their operating costs and increasing their own electricity generating capability, United Utilities are committed to improving their environmental performance and reducing emissions. The Fleetwood turbine is capable of generating approximately 1,970 MWh per annum, which will meet about 7 per cent of Fleetwood water work's annual electricity demand. By generating this considerable supply of electricity from wind power, up to 700 tonnes of the greenhouse gas CO₂ will be replaced every year.

Benefits to the Company and their costumers

- The EWT turbine has made United Utilities' network more resilient to the effects of climate change, reducing their reliance on fossil fuel derived energy, increasing efficiency and the use of renewable energy.
- Electricity generated by the EWT turbine at Fleetwood is almost entirely used on-site, due to the water works' intensive power demands. The turbine provides approximately 7 per cent of the water works' energy needs.
- It is expected that the turbine will save United Utilities' Fleetwood water works £150,000 each year it is operational, expected to be 25 years.
- By helping United Utilities keep their own operating costs low, the turbine is helping keep utility bills in the North West as low as possible.
- Approximately 700 tonnes of CO₂ will be saved for every year the turbine is operational (source: RenewableUK).



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