



WPD Smart Metering

Targeting Unoccupied Waste through Reporting and Engagement

4.5% reduction in total electricity consumption

Background

As one of the UK's Distribution Network Operators (DNOs), WPD seeks to drive benefits for consumers and to meet the challenges of delivering a low carbon and sustainable energy sector. WPD set itself a target of a 5% reduction in electricity consumption over eight years.

As a trusted partner with significant expertise in data analysis and energy management, Stark was well placed to support WPD in meeting this target through the delivery of an energy reduction programme by providing data services, performance reporting and a staff engagement campaign.

Challenge

Before the electricity reduction programme was introduced, WPD had faced a number of energy management challenges. For instance, there were big differences across its portfolio in terms of the size and age of operational sites.

While much of WPD's portfolio had automated meter reading (AMR) installed, work was needed to ensure the data completeness required for in-depth performance reporting. This included installing metering at new and shared sites, ensuring that Stark was the appointed Data Collector for all meters and gap filling by sourcing historical data from Supplier invoices.

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“ Stark designed a cohesive strategy that ensured all staff received visibility of our consumption and performance. It involved meeting staff across WPD and running our first company-wide switch-off week. We were delighted to achieve a 4.5% reduction in the first year.”

*David Withers, Estates Manager,
Western Power Distribution*

Solution

The initial analysis carried out by Stark highlighted a number of sites with variable baseloads and unusually high overnight consumption. Of these, five sites were then chosen for an energy audit to better understand the factors affecting electricity consumption and identify opportunities for reducing it. A set of recommendations was produced from the findings and distributed to site managers to inform them of zero and low-cost measures that could be carried out.

Introduction to Reporting

Reporting was a key part of the programme and crucial for sharing consumption data and communicating WPD's performance. Stark designed a WPD branded multi-level reporting suite launched via e-mail and accompanied by videos that explained the reports.

The suite of reports included weekly and monthly site level reporting showing a profile of each site's consumption. Site managers used these to review recent consumption and take action when high consumption was evident. Site managers also received a monthly dashboard to display on site noticeboards. Regional and senior managers received an executive reporting pack on a monthly basis.

The summary report showed regional and total consumption compared to the last month and the previous year. Regional league tables showed a range of performance stats that enabled regional managers to identify sites needing further improvement. A third report summarised changes in unoccupied consumption and ranked the top 12 sites with the highest unoccupied consumption.

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Staff Engagement Campaign

In addition to the site visits and multi-level reporting, staff engagement was also led by Stark. This involved our analysts attending regional management meetings and briefing site managers on the programme as well as seeking feedback on how Stark could best support them. Wider staff awareness of the programme was achieved via 'The Big Switch Off', a week during which staff were encouraged, through a range of communication channels to switch off lights and equipment when leaving their office.

Results

During the first year of the programme a 7% reduction in unoccupied electricity consumption was achieved, with a 4.5% decrease on the previous year, in total electricity consumption.

Energy performance targets are embedded across all levels of management, while staff better understand their role in energy management and are more aware of how they can affect energy consumption through the local control of equipment.

Future

The next phase of the programme will target ten of the highest consuming sites, with a change in focus to consumption occurring during working hours. To facilitate this WPD will be working with Stark to roll out sub-metering of their solar PV systems, which will provide a complete picture of electricity consumption.