Boosting sustainability in the industrial, automotive & aeronautical sectors with 30% energy savings

BONAPRENE PRODUCTS LIMITED

Client

zeronify

Partner

UK-based Best.Energy Partner Zeronify, is making waves with polyurethane manufacturer, Bonaprene, delivering significant savings in their energy-intensive manufacturing process.

The Client:

Bonaprene, the UK's leading polyurethane manufacturer, produces components for companies across sectors such as automotive, aerospace, oil and gas, mining and quarrying, and more.

With high energy usage and growing concerns around sustainability, Bonaprene sought a solution to sit alongside existing investments in solar and combined heat-and-power units. To reduce energy usage without impacting production, Zeronify stepped in with Eniscope as the solution.

Challenges:

- A lot of manual processes with limited automated controls and heavy reliance on operatives to drive efficiency
- Heating equipment being turned on too early and reaching target temperature before the site was operational, and being left on until the end of the shift despite not being used
- Dispensing machines running 24/7 and using energy at night when the plant was not operational
- Equipment occasionally left on overnight by mistake or left on standby for long periods when not in use during shifts
- High-energy intensity machines, such as large extractor systems, running flat out through the day despite fluctuating levels of demand.

CASE STUDY

Gareth Hughes, CEO and Founder of Zeronify explained:

"By installing Eniscopes to 2 of Bonaprene's main production lines, we shone a light on where energy was being used allowing us to identify many saving opportunities with no impact to their operation. We are delighted to have delivered ongoing savings worth 5x the client's investment generating significant value straight to their bottom line as well as further demonstrating their sustainability credentials."

What does the client think?

"Analysing the 24/7 timers was the first win and in every piece of machinery we saved from a couple hundred to a few thousand pounds, this was very quickly achieved. Having so closely monitored everything, I thought we would achieve 5–6% savings, but Zeronify's combined approach has enabled us to achieve 18% savings already. Plus identifying other areas to make more significant savings in the future up to 30%."

Ralph Kinch, Project Manager

Solution:

- Eniscope energy monitoring to gather real-time data of major energy-using equipment in 2 production lines
- Identification of key energy users on-site
- Collaboration with Site Manager to create a plan based around alarms, automated control and behavioural change to help the site make significant energy savings
- Empowering key energy controllers to use their integral knowledge of the equipment and production processes to drive energy efficiency without impacting output

Major Savings Identified:

1. Reduced usage of heating equipment as a result of optimising start up and shut down times.
2. Settings upgrade on dispenser machines leading to significant reduction in energy use whilst site was not operational through use of an in-built sealing option which allowed the main pumps to be switched off.
3. Alarms on all assets eliminating out-of-hours usage and asset left running when not required.
4. Upgrade to main extractor fan with variable speed drive and pressure sensors to match extraction demand and supply.

Results:

30% energy savings identified

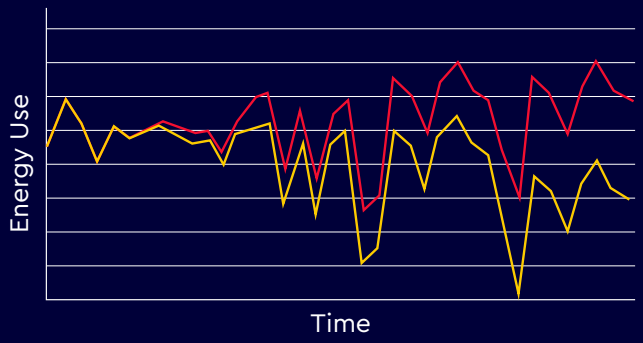
18% energy savings achieved in just 9 months

More than £20,000 saved on energy bills annually

Total visibility of energy consumption

Impact of energy savings:

Optimising start-up and shut-down times resulted in reduced usage of heating equipment.



Before **After**

+44 (0)1726 871 040 | sales@best.energy

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