

Optimisation of existing assets avoids capital outlay for new plant

Our Process Energy model allowed us to identify an opportunity to avoid significant capital expenditure on unnecessary new plant. We optimised existing assets for one of the world's leading brewery companies and successfully delivered substantial cost and emissions savings.

The Challenge

The client uses glycol chilling to package products at one of their main UK sites. Due to a perceived lack of chilling capacity, additional plant was being considered and had been budgeted for accordingly. Thorough investigation enabled us to fully quantify and understand the cooling requirements. Subsequently we proved the existing plant was sufficient to meet their current needs but could not be operated at full capacity due to the existing control philosophy.

“The energy savings and low capital cost on this project were achieved through understanding the client's requirements and process”

Julian Deshmukh, Project Manager, Projective

Benefits

- ▶ Net annual savings of **£30,000**
- ▶ Carbon dioxide savings of **230 tonnes** per annum
- ▶ Avoidance of **large capital expenditure**

Our Approach

We conducted a detailed Process Energy audit, reviewing the end to end energy requirements of the site. From this we were able to identify how best to optimise the existing plant with mechanical and automation upgrades.

Intelligent Solution

The Process Energy audit enabled us to determine the site's actual glycol chilling requirement. This indicated that the existing plant was sufficient but that it was being operated inefficiently.

Revisions to the control philosophy and mechanical enhancements prevented the unnecessary purchase of new plant.

The revised control enables the chillers to start, stop and load based on site demand, resulting in fewer chillers operating together.

This will enable the client to remove the older, more inefficient chillers in the future without a loss of system robustness.

The optimised chiller plant increased the overall plant performance by 25% and negated the need to purchase costly new equipment.

The Result

Cooling capacity is now sufficient and electrical savings of 438,000 kWh per year have been achieved, equating to 230 tonnes of CO₂ and £30,000.

The greatest benefit however has been the avoidance of large capital expenditure.



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