

Case Study

Client: Manufacturer of speciality chemicals

Services provided: Complete technical review of long-term supply strategy for steam and electricity

Industry: Speciality chemicals

Benefits achieved: Ensured the security of the site's steam and electricity supplies and greatest return on investment whilst reducing CO_2 emissions.

Summary

The site's aged energy supply infrastructure, comprising package steam boilers, a steam turbine and two gas turbine combined heat and power (CHP) plants was suffering from poor reliability and efficiency. This threatened security of steam supply for manufacturing operations and increased energy and maintenance costs. JRP were brought in to identify and analyse options for a long-term strategy to protect the site's steam supply and minimise energy costs and CO_2 emissions, whilst sourcing a suitable supplier to deliver the construction project and undertake the ongoing operation and maintenance (O&M).



"JRP have provided invaluable support and knowledge during the definition and agreement of the CHP contracts with the supplier. They have provided us with a great resource of experience and skills that have enabled us to enter into the contracts with the confidence that can only be obtained with real-life learning and practise". RC – Customer Project Manager

Scope and approach

Initially JRP carried out a detailed analysis of the performance of the existing plant and assessed a range of options for new or refurbished CHP plant, modelling energy balance and performance data on the sites existing hourly load profiles for electricity and steam and a range of pressures. This found that strategy of replacing the existing package boilers with two larger units combined with a single gas turbine CHP and new steam turbine solution would ensure security of the site's steam and electricity supplies and greatest return on investment whilst reducing CO_2 emissions.

The next step was for JRP to prepare a performance specification and request for proposal (RFP) for the new package boilers. The bids were reviewed in terms of compliance with the RFP and overall performance and



efficiency based on load profile analysis. JRP then supported the site in finalising the specification and scope of works with the preferred bidder.



It was agreed that the preferred way to implement the CHP strategy would be through an agreement with an Energy Services Company (ESCo). JRP were engaged to prepare an RFP to select a suitable ESCo partner. The RFP detailed the scope and technical, commercial, and contractual requirements for an ESCo partnership. The scope includes upgrade to, and on-going management of, the steam distribution and condensate return systems, operation of the new steam boilers as well as supply, installation and operation of new gas turbine and steam turbine.

Results

JRP's work ensured the security of the site's steam and electricity supplies and greatest return on investment whilst reducing CO_2 emissions.

JRP are continuing to support the site during the ESCo installation and O&M stages as part of a long-term partnership with the site.

For more information about any of JRP's services, call 0800 6127 567 or email info@jrpsolutions.com.

