<table>
<thead>
<tr>
<th>TOTAL COST</th>
<th>COMPLETED</th>
<th>DURATION</th>
<th>RESPONSIBLE BUSINESS</th>
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<td>£35M</td>
<td>2013</td>
<td>3Y 2M</td>
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Heathrow Energy Infrastructure Project
Project Description

As part of its strategic plan to reduce its carbon footprint, Heathrow Airport’s owner Heathrow Airport Limited commissioned the construction of Heathrow Energy Centre. Using sustainable fuels, the Energy Centre is designed to provide heat and power to the new Terminal (T) 2a and 2b buildings, as well as supplementing heat to Terminal 5.

The biomass technology used in the Energy Centre offers extra safety features in comparison to conventional steam powered heat generation. The system features a wood burning boiler that heats oil, which in turn drives an Organic Rankine Cycle (ORC) generator to produce power. The excess heat is used for a district heating scheme, while the electricity generated is fed back into the Heathrow High Voltage (HV) system to reduce the amount of energy used from conventional systems.

The Energy Centre and 10 kilometres of insulated pipeline were installed on a live operational site. Morgan Sindall Infrastructure’s project team consisted of a collaboration between designers, mechanical and electrical engineers and construction specialists based at Heathrow. This integrated team provided the customer with cost and programme savings by delivering key production dates, early design deliverables and complex programme management integrated with other contracts on the site, as well as integrated multi-contracts commissioning plans.

Responsible business

Planet

Heathrow Energy Centre is a vital component in Heathrow’s strategy to reduce CO₂ emissions by 34 per cent by 2020. The new Terminal 2 building is 40 per cent more energy efficient than required through building regulations. Half of this efficiency is delivered through the Energy Centre, which:

- Provides heat to Terminal 2a, 2b and 5, and cooling to Terminal 2
- At full operation offsets 40,000 MWh / year of gas and 12,000 MWh / year of electricity
- Delivers an annual carbon offset of around 13,000 tonnes of CO₂ per year compared to the use of gas and grid electricity

Challenges

Installation of six kilometres of 600 millimetre pipework while maintaining 24/7 access for airport operations.

Testimonials

“The Energy Centre is a key part of the T2 Programme and...
Infrastructure announces new partnership with UTC Heathrow

has been successfully delivered by an exceptional project team working in a collaborative and professional way."

Phil Wilbraham
Director of Programmes and Planning, Heathrow

Partners

Morgan Sindall Professional Services