

Assessment of Opportunity for Small Scale CHP in the British Army

client: The Ministry of Defence and the Carbon Trust.

client brief: Assess the applicability and opportunity for CHP within the British Army Estate.

our solution: Assessment of thermal and electrical loads across the Estates building types leading to techno-economic simulations of CHP systems. Implementation recommendations.

description: The British Army is one of the largest energy users in the UK, with an annual utilities bill in excess of £100M per annum. The Ministry of Defence has ambitious objectives for reduction of energy consumption and CO₂ emissions, including a specific target for the use of CHP heat and electricity within its estate.

In a jointly funded initiative with the Carbon Trust, Element Energy was employed to undertake a study into the applicability of small-scale CHP systems in the army's UK estate. Building on prior work for the Carbon Trust on the opportunity for small-scale CHP in the municipal sector, our assessment of the potential for CHP was based on an analysis of energy use profiles in the army's stock.

The successful lifetime operation of technically feasible schemes is largely dependent on having the correct management systems in place, with this the root cause of many failures. With this in mind, Element Energy suggested practical management structures for energy procurement and estates management to ensure the proposed schemes could be implemented successfully. Innovative commercial terms for procurement of energy services were also a key consideration.