

Glasgow Caledonian University



Client

Crown House Ltd

Capacity

0.845MW_e

Location

Glasgow, Scotland

Operational

2013

Manufacturer

GE Power & Water

Engineering & Installation

Clarke Energy

Type

1 x JMS412GS-BL

Primary Fuel

Natural gas

Glasgow Caledonian University commissioned Clarke Energy through main contractor Crown House to deliver a combined heat and power facility (CHP) at their campus in central Glasgow. The facility is a show-case for CHP technology and will give direct commercial benefits whilst acting as a teaching and demonstration aid for students.

The 845kW_e CHP facility utilising 1 x JMS412 Jenbacher gas engine from GE is linked to the campus through a district energy scheme with underground pipework connecting them together. This installation will provide a flexible and sustainable energy supply and will upgrade obsolete heating systems and boilers.

The works integrate to a robust campus infrastructure which is fit for the future and will reduce the university's carbon footprint by over 750 tonnes per year.

The new installation will: reduce annual operating costs and carbon emissions; provide a flexible and sustainable future energy supply; support long-term growth of the campus; offer the potential to generate income from selling excess electricity generated; and support the delivery of the university's carbon management plan as well as initiatives such as sustainable Glasgow.

The use of the CHP will require additional gas consumption which will be offset by a reduction in the electricity costs. It will result in approximate annual savings of £250,000 in operational costs over the first four years of operation (2013/14-16/17). It will additionally reduce the university's carbon taxes. The project is funded by SFC capital grand funding

The CHP facility will achieve a total fuel efficiency of 86.5% and achieves a good quality CHP scheme QI score of 146.3 which is over 46.3 points above the scheme's threshold.

