

Renewable CHP Solutions from LowC



Improved Energy Efficiency:

Generating heat and power in one process makes greenPower CHP units far more efficient than conventional power generation.

Reduce Energy Costs / Increase Efficiency / Maximise Profitability

Combined heat and power (CHP) systems from LowC can deliver significant energy and cost savings for new or existing developments.

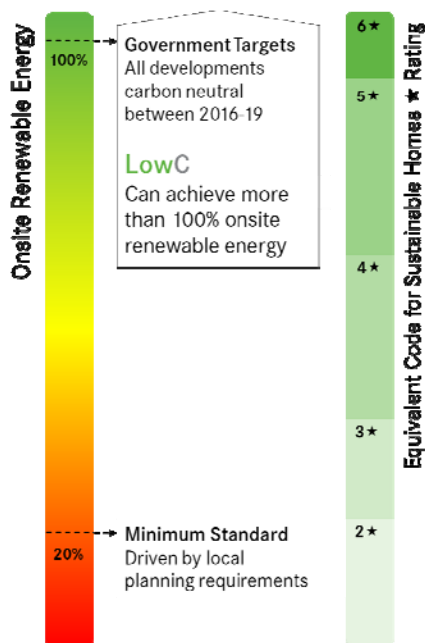
Installing a CHP system in new or existing buildings generates heat and electricity onsite, making optimum use of the energy within the fuel and resulting in electricity that is less carbon intensive than from the grid.

LowC is the exclusive dealer for German CHP manufacturer, Kuhse, in the UK and Ireland, offering fully-warranted pure plant oil (PPO) CHP systems. Based on Kuhse's greenPower CHP technology, the solutions delivered by LowC bring benefits such as:

- **Reduced energy consumption:** CHP units are up to 90% efficient, compared to only 30-40% efficiency for conventional power stations
- **Security of energy supply:** equipment is specifically designed to be able to run on renewable fuel sources such as pure plant oils (PPO), used cooking oils and fully renewable biodiesel, minimising reliance on fossil fuels
- **Profitability:** Excess electricity can be sold to the grid and is eligible for Renewable Obligation Certificates (ROCs), providing excellent returns and short payback periods on capital investment
- **Compliance with planning regulations:** by far exceeding planning requirements for 10-20% onsite renewable energy supply (providing the opportunity to go beyond carbon neutrality)
- **Market Differentiator:** Cost-effectively achieving high renewable energy content increases the appeal of developments in increasingly competitive property markets, as well as increasing community buy-in
- **Simple maintenance:** systems based on tried and tested German-made technology
- **Control:** Sophisticated web-based remote monitoring systems, ensure full control and optimal performance is maintained at all times

Versatility

LowC can supply greenPower units in a wide range of sizes, from 30kW up to 18.5MW, to meet the needs of most projects. Whether the requirements are for standalone, self-contained energy plants or for flexible modules that can integrate into existing systems, there is a range of individual or multifunctional systems available.



Renewable CHP: LowC delivers solutions that far exceed requirements for 10-20% renewable energy generated onsite.

LowC making low carbon communities happen



Renewable Fuel Supply: Seeds from the Jatropha plant give a higher yield than other plant oils and can be grown in marginal areas that are unsuitable for food crops.

Where is CHP most appropriate?

In order to maximise returns on the capital investment in CHP, there needs to be a use for the heat and power generated.

This makes CHP an ideal solution where there is a steady demand, for example:

- community heating systems
- schools
- hospitals
- hotels
- agricultural buildings
- sports centres
- breweries

In buildings where cooling is required, such as **offices, shopping centres, warehouses and airports**, CHP units can also be coupled to an absorption chiller to provide cool air.

Sustainable Fuel Supply

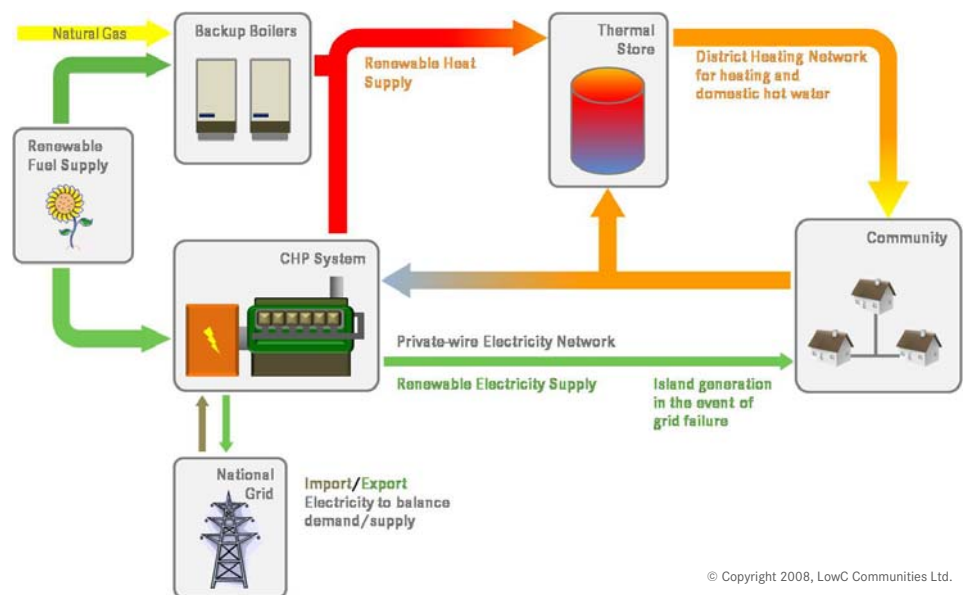
As part of our sustainable fuel policy, LowC is developing a supply chain for fuels which are derived only from waste and non-food materials, ensuring that our solutions remain compliant with both BREEAM and Ofgem requirements.

The majority of fuels LowC specifies are based on recycled oils or oils from plants like Jatropha which are non-food materials grown on non-food quality land.

Jatropha offers a high oil yield of up to 40% per seed, and grows quickly in marginal land such as deserts, meaning that it doesn't compete with food crops. Jatropha oil can be used in greenPower equipment without modification.

Cost-Effective Community Energy Generation

Through several Building Schools for the Future (BSF) projects, using the strategy illustrated below, LowC has demonstrated that renewable CHP systems running on pure plan oil can be cost-effective.



Fully Guaranteed Solutions

LowC operates long-term maintenance schedules as well as managing financing, insurance, contracting and fuel supply and storage. In addition, LowC also provides technical project planning and implementation as well as final commissioning of the plant.

For more information about how you can benefit from CHP please contact Richard Griffin at rg@lowc.co.uk or call the number below.