

Net Zero NHS Scotland 2025

Delivering Carbon Savings for Critical
Infrastructure



We Do Energy, Right by You.





Marc David | Strategic Energy Partner

Case Study | The State Hospital

Energy Solution: Oil to LPG



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Understanding Our Customer

Customer Profile

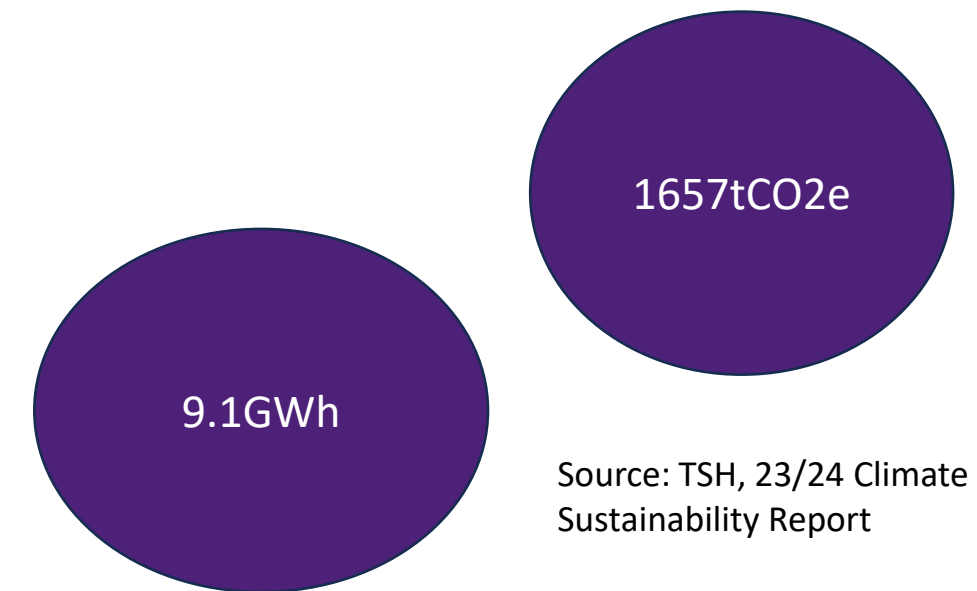
- Significant Estate across 10+ buildings
- Constant baseload of low-grade heat (6.5GWh)
- Gas Oil heating system (700kW x2)
- 840kW Biomass Heat System (Woodchip) providing flexible heat output

Customer Challenges

- Secured Site, controlled access for installation and deliveries
- High Heating Costs
- Need to decarbonise
- Limited internal resource to manage complex projects

Client Drivers

- National targets of **Net Zero by 2040**
- 75% reduction by 2030 (Scope 1 & 2)
- MCPD compliance



Source: TSH, 23/24 Climate Sustainability Report

Understanding The Challenge

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Objectives

1. Provide a turnkey project
2. Deliver a reliable, lower carbon and cost-efficient heating system



Site Constraints

Controlled access to site
No downtime during switch out



Procurement

Flogas Britain
procured through
ESPO framework
CapEx from Scot Gov
LCITP

Delivering The Solution

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6 x 2T LPG Tanks
and vaporiser



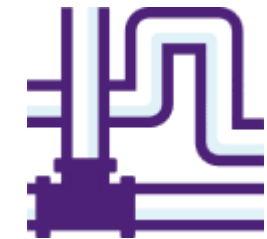
Duel Fuel Boiler
retrofit, new burners



Full civil works for
LPG Compound



MEP



Gas service pipework

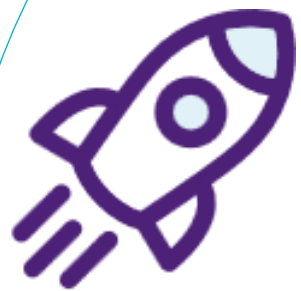
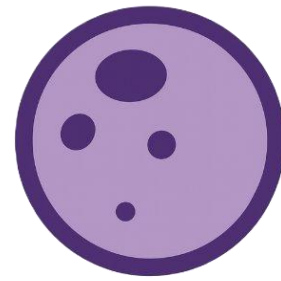


What we Delivered

- **Full project management** and delivery of system
- Gas compound was constructed and installed beyond perimeter fence
- Molling of 2 x drill pits for gas pipeworks
- Decommission and uplift of existing redundant tanks, **freeing up 143m2 of vital estate**

Evaluating The Outcomes

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1600T Carbon
saved,
equivalent to
going to the
moon and back
12 times



Lessons Learned

Project delivered **on time** and **within budget**

Carbon Savings

Yr 1 (expected) = 181t

Yr 1 (actual) = 274t overachieving original estimates

Total savings YTD 2747t delivered LPG = 1600t Carbon saved*

Commercial Implications

26% reduction in energy costs + savings through reduced maintenance

Next Steps ...

*Like for like savings to 3.6mL gas oil (since 2018)

What Our Client Had to Say

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“The installation was incredibly straight forward, and the Flogas team managed it all against a very tight deadline. From initial consultation through to the actual installation process, Flogas met all our expectations and communication was excellent.”

Brian MacLean – Estates Manager, TSH

Energy Partnership for NHS

Delivering against carbon targets as strategic partner



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Low Carbon Fuel Switching

Bio-Gas

- ✓ Very Low Lifecycle GHGs
- ✓ Drop In Fuel
- ✓ Available Today

- ✗ Immature Market
- ✗ Limited Feedstock
- ✗ Infrastructure Investment (onsite)

Electrification

- ✓ Net Zero fuel from 2030
- ✓ Technology Costs Reducing
- ✓ VPP and Smart Grid options

- ✗ Electricity Costs Are High
- ✗ Grid Upgrades
- ✗ Resiliency Issues

Hydrogen

- ✓ Green H2 – zero emissions
- ✓ Suitable for Industrial process
- ✓ Synergy with Renewables

- ✗ Supply Chain Limited
- ✗ High Delivered Cost
- ✗ Calorific Value

District Heating

- ✓ Cost Efficient at Scale
- ✓ Hospitals are anchor loads
- ✓ Reduces individual OpEx (Boiler)

- ✗ Lack of Certainty
- ✗ Aged Estates
- ✗ Regional and Local Variances

Flogas Britain

Part of the DCC Plc family of energy businesses



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DCC Plc - overview

DCC ENERGY

DCC Energy is putting cleaner energy in your power by leading the sales, marketing and distribution of cleaner energy solutions. We do this across two businesses: Energy Solutions and Mobility.

EUROPE & USA

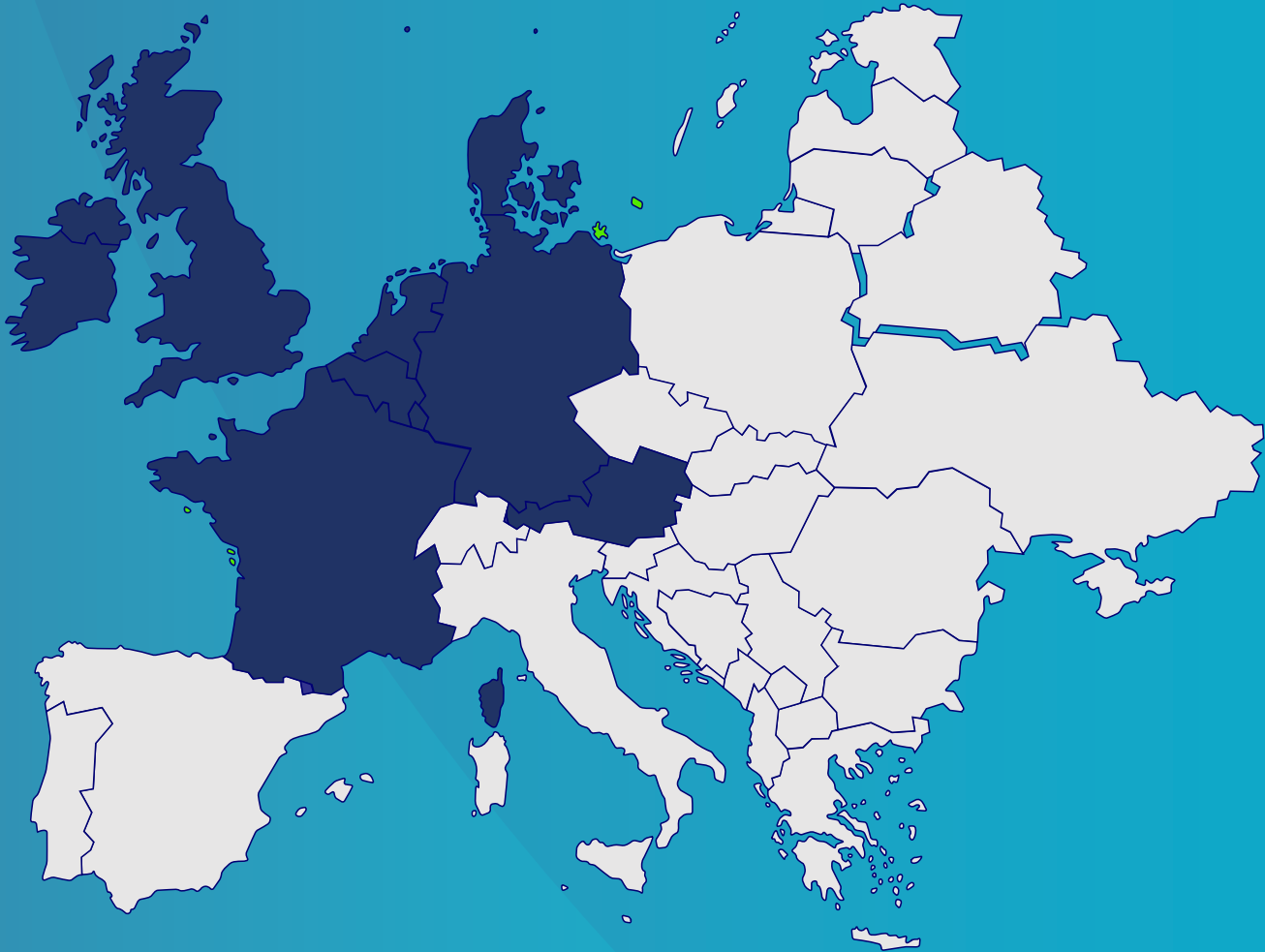
France	Austria	Belgium	Germany
UK	Denmark	Netherlands	Luxembourg
Ireland	Norway	Sweden	USA



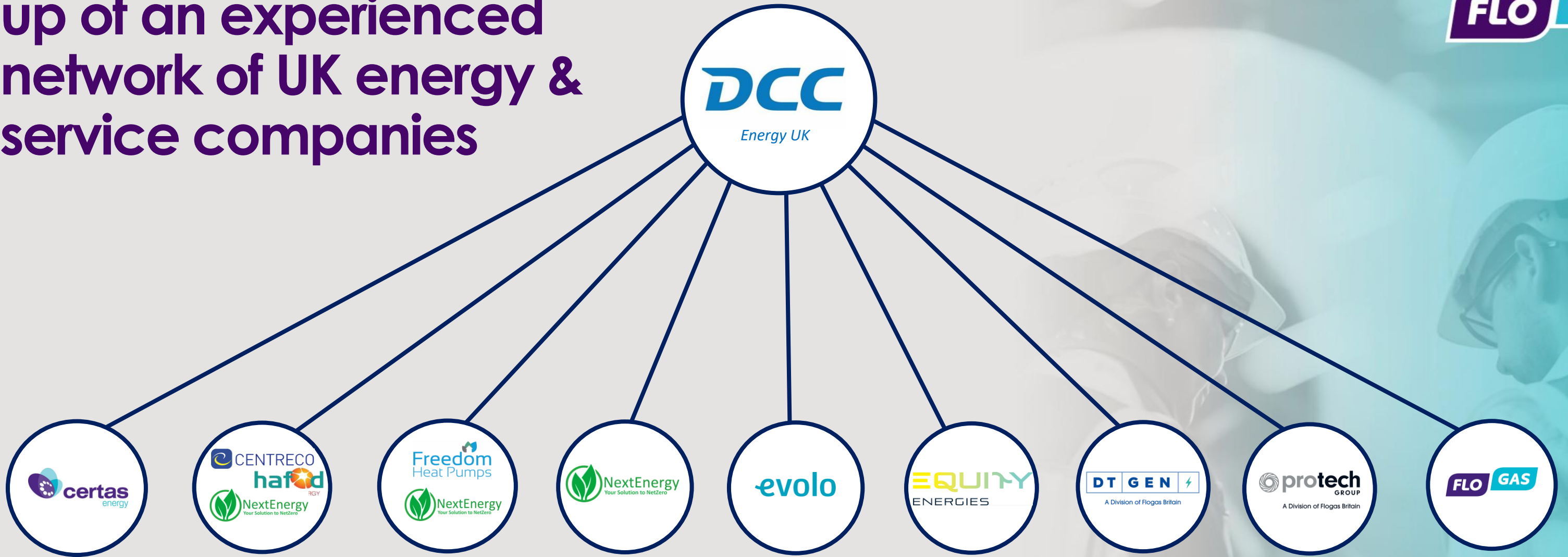
1.7m

8,700

12



DCC Energy uk are made up of an experienced network of UK energy & service companies



Bulk Fuels	Solar PV	Heat Pumps	Fabric Retrofit	EV Chargers	Consulting and Energy Management	Power Generation	Engineering & HVAC	Liquid Gas
<div>Oil</div> <div>HVO</div> <div>Lubricants</div>	<div>Solar/ Battery installation</div>	<div>Heat pump Installation and distribution</div>	<div>Insulation</div>	<div>EV charger installation</div>	<div>Procure</div> <div>Measure</div> <div>Manage</div> <div>Carbon consulting</div>	<div>Power-gen</div> <div>CHP</div>	<div>Eng. solutions</div> <div>HVAC</div> <div>Water solutions</div>	<div>Gas</div> <div>Bio-gas</div> <div>rDME</div>

BioLPG Further Info

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A Renewable Gas Guarantee of Origin (RGGO) is a type of Environmental Attribute Certificate of which there are many kinds in common use in the UK[1], across Europe and around the world[2].

The RGGOs allocated to Flogas customers represent the kWh of biopropane produced and physically supplied to Flogas. Once supplied to Flogas, biopropane mixes with other sources of propane received and it is not possible to physically track who received the biopropane (which is chemically identical to propane) from fossil sources. Instead, the RGGO is used to allocate the “green value”[3] to a particular consumer and ensure that they are the only party to claim to have used that unit of biopropane.

RGGOs are issued as electronic certificates in a secure digital database. This ensures that only one RGGO is issued for each kWh of biopropane and that once it is allocated to a consumer it can be marked as retired and cannot be used again.

If you purchase renewable electricity, there are similarities in the electricity market when mass-balancing power contracts from renewable sources.

Biopropane is also recorded as ‘**Outside of Scope**’ on the UK Government Greenhouse Gas Conversion Factors (2024) for **Scope 1 CO2 emissions** [4].

[1] <https://www.gov.uk/government/publications/green-gas-levy-ggl-rates-and-exemptions/exemptions-from-the-green-gas-levy-ggl-approved-biomethane-certification-schemes>

[2] <https://www.ofgem.gov.uk/environmental-and-social-schemes/renewable-energy-guarantees-origin-rego>

[3] <https://www.greengas.org.uk/certificates>

[4] <https://www.gov.uk/government/publications/greenhouse-gas-reporting-conversion-factors-2024>

E&OE.



Thank You

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