



## Calibrate Chronicle Issue 7

Welcome to the spring edition of our newsletter, providing news, ideas and opportunities for your business

### This edition:

- An Important Announcement
- Ground Loop Extension Project, Scotland | Combined Heat & Power | Project Installs
- Industrial Energy Transformation Fund | Calibrate Analytics
- Team News
- Energy Transformation Plan

## An Important Announcement

Calibrate Energy Engineering Ltd. has been acquired by RSK Group Limited (RSK). The acquisition includes all the employees, contracts, leases, and other assets of the business. Calibrate Energy Engineering Ltd. will move forward – with its existing, management and employees - under new ownership as part of the RSK group. Our leadership, workforce, brand, and strategy will all stay intact.

This sale will allow the business to grow and develop more than would have been possible alone. Calibrate Energy Engineering Ltd. will retain its brand, leadership, values, strategy, and culture while gaining support and reputation from a much larger parent organisation. The business will continue to focus on its core service range of commercial heating, chilling and electricity generating solutions, providing our clients with the exceptional standard that is expected of us.

Susie McDonald, Shane McDonald and Jack Smales will continue as Directors. More widely, the same workforce will deliver services to support your business.

This will not affect ongoing projects and commercial arrangements and contracts. We are keen to ensure that the change causes little-to-no disruption to our contracts and relationships. All the employees are remaining in the business, and we are confident in the wealth of expertise and capabilities needed to deliver fully to our clients.

RSK is a multidisciplinary environmental, engineering, and technical services business. The business has grown significantly through acquisition, the formation of new businesses and organic growth. Today, it comprises over 175 businesses aligned to deliver end-to-end solutions in a wide range of sectors.

RSK has a strong track record of growth through acquisition, bringing technical excellence into the group and facilitating the collaboration between business units. This approach allows each business within the group to continue operating in the way their clients expect while utilising the support of a large and diverse group.

We will continue to build on the success we have had to date and with the support of our new parent company, we will unlock new opportunities for the business and all employees.

Our registered entities remain unchanged, so company numbers are not affected. Our registered address has changed and is now: Spring Lodge, 172 Chester Road, Helsby, Cheshire, WA6 0AR, UK. The business is now a subsidiary of RSK Environment Limited, which is a subsidiary of RSK Group Limited.



**Calibrate Energy Engineering Director Susie McDonald, who will continue in the business, said:**

*“We are thrilled to become part of RSK Group in order to realise our vision to grow and make a greater impact with what we do. Although we are a progressive business, we have always been a small business with big ideas to expand into new industries. This acquisition allows us to take those ideas and accomplish our strategy quicker and with greater effect and we welcome the support and impressive credentials of RSK Group to enable us to accomplish that. In return, we are able to offer RSK Group a unique set of knowledge and skills to their wide scope of credentials.”*

## Ground Loop Extension Project, Scotland

Calibrate have expanded the original system they installed for a soft fruit farmer in Scotland, thanks to Ofgem's ground loop extension allowance.

We designed the original 1996kW Ground Source Heat Pump (GSHP) Heat/Chill system to support the business's rapid growth plan and to help reduce the operational costs. The aim was to achieve the best efficiencies with a heating output of 20-35°C and a chilling output of 0-10°C. 30,000m of in-ground pipework was installed to defrost the fruit, chill fruit juice and dry fruit pulp. The system achieved 0°C at 300% chilling efficiency and 35°C at 350% heating efficiency with an impressive total energy efficiency of 650%. This was all whilst benefiting from just a 3-year payback on the Government's 20 year RHI scheme. This solution is fully automated to provide efficient simultaneous heating and chilling, maximising efficiency via the remote access control system. The heating is used to defrost fruit pulp, and the chilling by-product chills fruit juices and extracts post sterilisation process. The GSHP will achieve 80% of the total chilling requirement, whilst continuing to generate the RHI tariff through the heating of the water to defrosting of frozen fruit. The use of this heat has enabled a 100% reduction in fossil fuels.

Three years on, Ofgem announced the ability to extend ground-loops with existing built-in capacity. This allowed businesses to increase performance of their system, whilst benefiting from extra

income for the remaining years of their RHI term (17 years in the case of this client). The second phase of the project was completed to provide an additional 1MW heat and 750kW of chilled capacity bringing the site's total capacity to 2250kW (equivalent of 15 cold stores).

This increased capacity on the original system, has met the needs of this growing business and secured a significant extra income for years to come. The business benefits from a heat/chill system demonstrating significant savings and earnings, as well as hands off monitoring thanks to the innovative controller attached to the system. The GSHP comes complete with a maintenance package so there is no unexpected expenditure for the remainder of the RHI tariff.

### Phase 3

On the strength of the success of these projects, the client is adding an extension to the chilling network on the heat pump as well as joining the Gridflex platform to balance energy and ear an income from the National Grid.

## Combined Heat & Power

We can solve your energy cost crisis and zero-carbon targets!

CHPs are the technology of the moment for high energy-use businesses. We have regularly reported clients reducing their energy bills by 50% by installing a CHP with a ROI of well under 2 years, giving your business long term sustainability. In the last few weeks, we have seen gas prices at an all-time low and electricity prices still rising with the Government planning to reduce financial support in March. If you are on a low gas tariff, you really could benefit from one of these gems!

Although figures will vary from case-to-case, these are unbelievable savings for many and below we have 2 examples of clients who have embraced this energy transformation.

Current gas  
market rates  
£8p KWh

Current electric  
market rates  
£35p KWh

8p KWh x 2.9 (the ratio to  
transform gas into the equivalent  
electricity output) = 24p

**= £11p** Savings per KWh

(\*these rates will vary on a  
case by case basis)

## CHP Project Installs

It's always exciting to get a new system delivered to an install site. Here we have a 250kW Combined Heat & Power unit delivered to our client in Northumberland. This is the first stage of the project, which will eventually become a significant 1MW system to significantly reduce energy costs and reduce carbon emissions. We also have another 250kW Combined Heat and Power plant being craned into a client in Barnsley.



# Industrial Energy Transformation Fund

We understand how switching to more carbon-friendly technologies on a commercial scale can be a significant outlay. That's why we aim to help you to find support for your project, through the Industrial Energy Transformation Fund (IETF). The fund is designed to help businesses with high energy use to cut their energy bills and carbon emissions through investing in energy efficiency and low carbon technologies. The government announced £315 million of funding in the 2018 Budget, and this is available up until 2027.

The Department for Business, Energy & Industrial Strategy (BEIS) manages the IETF for England, Wales and Northern Ireland, with £289 million to invest over consecutive application windows split into 2 phases. If the site is based in Scotland, you can apply for the Scottish Industrial Energy Transformation Fund (SIETF). Grant funding is available for feasibility and engineering studies, and for the deployment of industrial energy efficiency and deep decarbonisation projects covering the following project types: Studies Feasibility and engineering studies to enable companies to investigate identified energy efficiency and decarbonisation projects prior to making an investment decision. Energy Efficiency Technology deployment to reduce industrial energy consumption. Deep Decarbonisation Technology deployment to achieve industrial emissions savings.

The current round of funding closed 17th February 2023 and the new round has just been announced as (TBC).

## Eligibility

The funding is open to eligible SIC codes including industrial processes:

- Mining and quarrying (SIC 05101 to 05200, 07100 to 08990 and 09900)
- Manufacturing (SIC 10000 to 33200)
- Recovery and recycling of materials (SIC 38320)
- Data centres (SIC 63110)

## How do I apply?

It is advised to check eligibility at [ietf@beis.gov.uk](mailto:ietf@beis.gov.uk) and include "Eligibility screening" in your email title. If applicable, an application can then be made through the IETF area of the .gov.uk website. This is a long, complex and time-consuming process requiring a significant amount of due diligence to evidence the benefits to secure funding. As well as completing the application form, each online application must include a Finance Form, Project Benefits Calculator, Gantt chart, Risk Register for the project and various other optional information that can make the application more robust.

Calibrate are aware that the technical and project management information required for the application process can be quite daunting, so we offer a service where we complete the application for you (once we have received key information about your business.) There is a fee associated with this, but it aims to take the majority of the work out of your hands and allows for a greater chance of success. For more information please get in touch.

## Calibrate Analytics

The demand for our Calibrate Analysers to assess, control and transform energy use is on the up! Here are several ready for installation at sites around the country for progressive businesses wanting to challenge the current energy crisis and the effects it is having on their business.

Plugging one of these into your energy-guzzling assets will provide you with the information you need to transform your business's energy strategy.



**Up to  
70%  
funding!**



## Five-a-Side Football Tournament

It can't be all work and no play in business...

We may have been beaten in the 'Business Fives' five-a-side football quarter finals but what a fun day out for the Calibrate team... A great team building exercise and well done to Morgan as top scorer!



## New Team Members

This edition, we welcome four new team members. Chris joins Calibrate as Financial Controller, Adam takes over at the helm of the Operations and sales function, Cassie as Operations Support with particular focus on health and safety and Sam as Accounts & Admin Assistant.



**Chris Allcock**  
Financial  
Controller



**Adam Crosby**  
Operations  
Manager



**Cassie Cookson**  
Operations & Logistics  
Associate



**Sam Broughton**  
Accounts & Admin  
Assistant

## Farewell

We say a sad farewell to Martyn Scott, who has been a tremendous asset to Calibrate, but has decided to move on after 4 years in the business. We are sure you will join us in wishing him all the best for the future.



## New CHP Supplier

Calibrate took a recent trip to Portugal last week following our new collaborative agreement with the largest CHP manufacturer. Here, the team is pictured in front of an old CHP engine, we can't wait to see our newly branded version come hot off the production line next month!

# Energy Transformation Plan

How to make energy work for your business

Stage 1



## ANALYSE | Take Control

Innovative energy assessment to identify energy behaviours in your business and how they can be improved

- ▶ Bespoke software platform
- ▶ Real time, fully adjustable control of power generation and use
- ▶ Control everything from heating through to lights
- ▶ Simulate the benefits of power generation or power savings
- ▶ Track, & monitor everything from your phone or laptop.

Stage 2



## OPTIMISE | Re-Calibrate

Adjust and Engineer improvements to optimise performance

- ▶ Automate and control your energy-hungry equipment correctly
- ▶ Fine tune processes in real time from your phone
- ▶ Improve mechanical and electrical system with our in-house commercial and industrial renewables specialists
- ▶ Hands-off Maintenance Package for peace of mind.

Stage 3



## CAPITALISE | Trade Energy

Grid balancing for extra income, similar to an energy stock exchange

- ▶ Turn off heat pump at set times and receive ££ from the National Grid
- ▶ Turn up heat pump when there is too much electricity available at the Grid and receive ££ to use cheap power
- ▶ Trade carbon credits
- ▶ Balance onsite usage to match power generation, avoiding import costs
- ▶ Digital real time dashboard to evidence power income.

## Making Net Zero a Reality

Get in touch for further information.

## Energy Transformation in Action

Calibrate analysed energy use and optimised systems for one client so they could capitalise on the improvements.

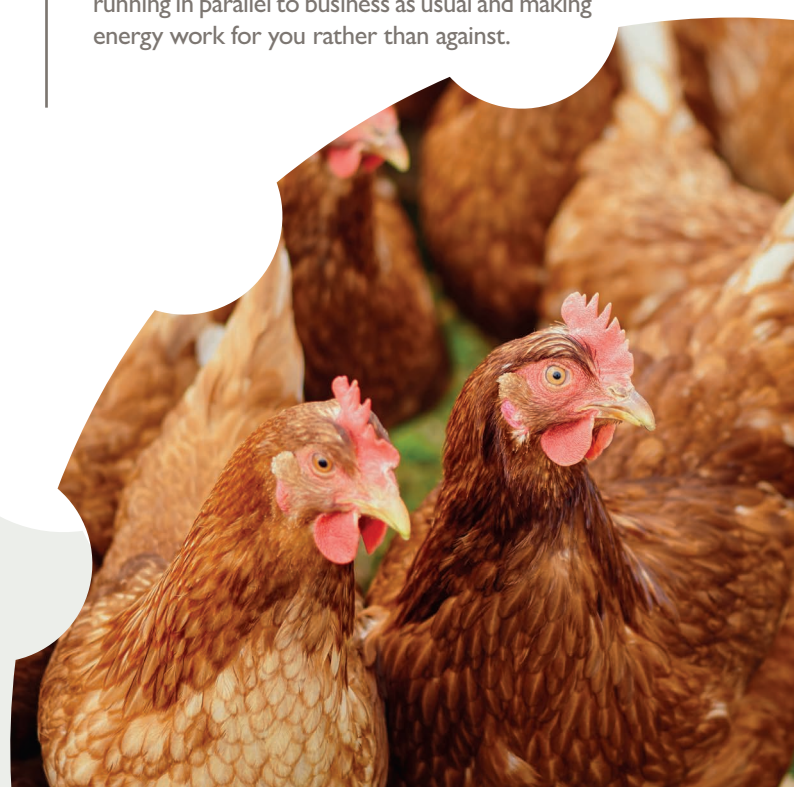
- Saving £117,000 p/a on electricity
- Reducing carbon emissions by 136 tonnes CO<sub>2</sub> per year
- Increasing efficiency of heat pump to Ofgem RHI standards to maintain income

As energy prices soar, Calibrate has helped a Telford poultry farmer save £117,000 per year on energy. The farm's energy bills doubled from £220,000 to £440,000 per annum so in re-engineering their older system installed by a third party, Calibrate have transformed the farm's energy profile.

**Analyse** | By attaching the Calibrate Analyser to the farm's existing technology (an older heat pump installed by another provider) we were able to demonstrate in real time, what some simple changes would the business's bottom line surpassing all expectations for the system. With the data gathered from the controller, the team set about designing a series of improvements to heighten performance and the outcome was significant.

**Optimise** | By re-working some inefficient settings and implementing some re-works to the heating loop, the heat pump's co-efficiency of performance doubled to go above the standards expected by Ofgem, meaning the farm's RHI rebate was no longer threatened. The farm was also able to drastically cut energy costs and carbon emissions.

**Capitalize** | Following this sort of project, and with a software upgrade, the next stage that the client can consider is Calibrate's **Gridflex** service. This is where the controller acts as an energy aggregator, adjusting electricity use at peak times and selling excess energy back to the National Grid. **Gridflex** fully manages this behaviour, providing clients with a totally hands-free passive income running in parallel to business as usual and making energy work for you rather than against.



# About Us

## Products and Services

### Ground Source Heat Pump (GSHP)

We install between 499kW and 6MW UK-wide and pride ourselves on our bespoke, innovative, modularised and 'hands off' solution.

### Combined Heat & Power (CHP)

With output ranging from 50kW to 200kW, the Calibrate CHP can run on gas, LPG, CNG or hydrogen and produces electricity and heat up to 85°C.

### Calibrate Analytics

Our Calibrate Analyser will assess your energy use and identify how to improve your energy use.

### Calibrate Beltdry

Our modularised Calibrate Beltdry uses a high temperature-resistant belt and is ideal for many industries from food to chemicals, and ensures the processing of the highest quality end product.

### Gridflex

Our energy balancing service allows customers to profit by matching their energy generation and use to the needs of the National Grid.

### Maintenance

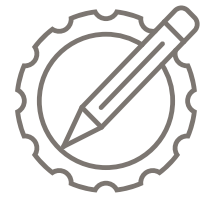
All our products come with the option of a 1 – 20 year maintenance package for continued support and peace of mind.

## Key Industries

The systems we install are industrial in size and commercial in scope and we have gone the length and breadth of the UK to do this.

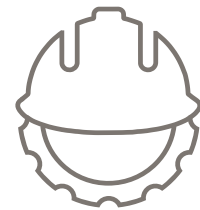
They are ideally suited to high energy-use industries such as:

- **Agriculture/Horticulture**
- **Chemical and Life Sciences**
- **Food and Drink**
- **Manufacturing and Processing**



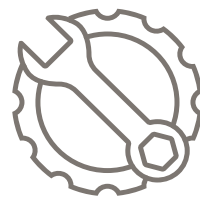
### Design

We design a system around your business, not the other way around, providing you with full remote access.



### Install

We ensure that all Calibrate systems are installed on-time and with least disruption to your business.



### Maintain

Our systems come with the option of a 20-year warranty ensuring you have peace of mind at all times.

### Contact:

[info@calibrateltd.co.uk](mailto:info@calibrateltd.co.uk) / 01668 215 544

[www.calibrateenergy.co.uk](http://www.calibrateenergy.co.uk)



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# Calibrate

Energy Engineering



In partnership with



Accredited Installer

\*All formulas and calculations are derived from industry suppliers and MCS guidelines, it is advisable to have the calculations and formulas checked by a certified mechanical engineer, and as such, Calibrate Inc. Ltd (Company # 08277206) will not be held liable for any incorrect formulas or calculations or any accidental misrepresentation.