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If we lose the time before us, the future will ignore us...

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GB Lubricants are taking huge strides in pursuing their desire to become more sustainable, reduce their CO₂ footprint and engage with the local community. These are not just words on a page but a vision that in just a few months will become normal day to day practice. But how is this possible?

Imagine a new power economy which harnesses the energy from the sun, the heat from within the Earth. Imagine clean energy without the need to burn anything. Jeremy Crooks (Head of Innovation, Coal Authority also known as Jez) was a TRUE visionary when, almost 3 years ago, he put forward the idea to use Gateshead's redundant coal mines and turn them into a renewable energy source for Gateshead's District Energy Scheme (DES), based in the North East of England. Working with Jim Gillon (Energy Service Lead) for Gateshead Council and colleagues at the Coal Authority, this is a story of how one team's ingenuity will benefit generations to come.

Funded and owned by Gateshead Council, and operated by Gateshead Energy Company, the District Energy Scheme was built to serve Gateshead town centre's current and future energy needs for decades to come, – it sets the blueprint for next-generation district energy, integrating heat and power generation and distribution, with energy storage, whilst providing national grid services.

Working with district energy experts WSP Ltd. the Council designed and procured the initial energy centre and wider network. Construction was by Balfour Beatty

Construction and began in June 2015, with Clancy Docwra beginning work on the underground heat and power network in January 2016. The 4MW (megawatt) of combined heat and power engines are installed and maintained by Edina UK Ltd. The Energy Centre was completed in March 2017 and has been providing heat and power to customers via a new 5km underground network of heat pipes and high voltage 'private-wire' electricity cables.

The Gateshead Energy Company, following a government grant of £5.9m, has now completed a 6MW minewater heat pump – the largest in the UK to date – on one of its Depots, on Shearlings Road. The firm has also created three boreholes in the Baltic Quarter where 140 litres – two bathfuls – of minewater per second can be pumped to extract the heat, returning cooler minewater back underground..

The scheme originated in 2010 from their ambition to provide low cost, low carbon energy for Gateshead town centre. All their customers receive at least a 5% discount compared to market energy tariffs. However, it has grown into a major infrastructure scheme that will underpin the future redevelopment of the town centre, stimulating inward investment

and job creation, as well as becoming a significant trading opportunity to support their financial position. Under the watchful eye of Jim Gillon from the Energy, Major Projects and Development team at Gateshead, this project developed and in March 2017 the initial scheme launched supplying public buildings such as Gateshead Civic Centre, the Sage Gateshead, BALTIC and Gateshead College – and homes managed by the Gateshead Council. In 2017 Gateshead Council were presented with the Visionary Project Award by the Association for Decentralised Energy (ADE) at its 50th anniversary awards ceremony at the Science Museum in London. The special award ceremony was recognising the most significant schemes of the past decade, as well as looking for those schemes setting the bar for the next decade of energy initiatives.



What does the future bring for this project? By 2030 solar panels and water pumps across Gateshead town centre could heat over 20 public buildings, 1250 homes and Gateshead's new Arena and Conference Centre. Two operational solar parks will be generating 3.6MW and new housing developments will be built incorporating this new energy moving the town one step closer to net zero carbon future.

Both Gateshead Energy Company, and the Council, have committed to becoming net zero emissions by 2030, and in addition to the minewater and solar parks built so far, continue to explore more options to green up their energy supplies – exploring deep geothermal sources, green hydrogen, cooling networks and EV charging points.

Thanks to pioneers such as Gateshead Council, this District Green Energy Scheme case study is being considered across Europe and beyond.

It is always nice to be the first, the first anything and Gateshead company GB Lubricants as part of their initiative to reduce carbon and use sustainable energy for their manufacturing plant are the first private company to engage and embrace this scheme. I took a trip to Gateshead to explore more and see this DES from an operational perspective and to visit GB Lubricants so I could see first-hand their operational switch to green energy. GB Lubricants are striving to be an industry leader when it comes to sustainability and are committed to minimising its impact on the environment.

The company, which has been manufacturing and supplying high quality oils and lubricants since 1877, has achieved the coveted EcoVadis Gold rating in Corporate Social Responsibility (CSR) and Sustainability for the third year in a row, in 2022. To put this achievement into perspective, the certification puts GB Lubricants within the top five percent of all companies evaluated worldwide by EcoVadis for the company's sustainability credentials.

GB Lubricants' Managing Director Paul Booth is on a mission to ensure a positive and prosperous future not only for the company, its workforce and local community, but also the industry and the planet. To retain the EcoVadis Gold rating, GB Lubricants has had to continuously raise the bar. Their gold award is the culmination of incremental improvements in many areas of business activities including environment, labour, human rights and ethics. The company is already working hard to retain the gold award in 2023.



Using the scheme as an alternative to traditional supply seems a logical move given the location of GB Lubricants, however, the desire to be more sustainable is more than just geographical positioning. When we talk about sustainability, carbon footprint etc quite often companies become consumed with the product or services but GB Lubricants have taken a step back to look at their supply chain integrity and develop ways in which they can push their operational efficiency to a new level of production site sustainability, benefitting their customers, employees and production site alike.

I met up with Martin France – the Council's Energy Projects Team Leader, who has overseen the last stages of the minewater and solar scheme – as well as, Graeme King (Communications Gateshead Council) to walk around the project and understand more about its infrastructure. Accompanied by Simon Taylor (Operations Manager), Paul Perry (Group Facilities Manager) and Paul Booth (Managing Director) of GB Lubricants to uncover more about the scheme itself and how it would be of benefit to GB Lubricants and from an operational perspective how they would be implementing this technology and the long-term change it brings to their business.

Paul Booth explained 'When we first heard about Gateshead Council's pioneering Green Energy scheme their community driven environmental goals instantly resonated with our own. We had been closely monitoring progress for several years before proactively chasing hard to collaborate as soon as the council team were in position to expand the coverage outside of their own facilities. It's important to us that this investment is embedded into our long-term strategy that's why we have committed to a 20 year connection. Not only does it provide a real business benefit during these uncertain times, it is also a huge opportunity for our company to pursue its desire to become more sustainable, immediately reduce its CO₂ footprint on our path to zero carbon energy, and support the local council and community. Being the first private company to connect in to this scheme is an incredibly proud moment for myself, our dedicated operations team who worked so hard to deliver this, our employees, and especially our family board members who have shared and backed our long-term sustainability vision ever since I arrived in 2016. For a company about to celebrate 150 years of business in 2027 it's exciting to still be looking to the future

and harnessing new technologies. Being sustainable is more than just reducing carbon, it includes taking a holistic approach to the organisation and seeing how it can work within its local setting to the benefit of the wider community. By connecting in to this scheme I hope it will encourage other local businesses to join in the future. It's my hope that our major commitment will help seed further growth for Gateshead Council in supporting Green energy for local authority housing, job creation and achieving their own ambitious carbon targets. For GB Lubricants this is another element in making long term tangible changes in how we do business to protect ours and everyone else's future.



Our aim is to be at the forefront of low carbon, sustainable manufacturing for lubricants. The Energy project realisation further cements our position as a very attractive business to deal with especially for our customers, end users, distributors and suppliers who are also following sustainable agendas. We want to grow our profile to be seen as one of the most sustainability proactive lubricant companies worldwide.'

This is a huge step forward in renewable energy for towns and businesses, driven forward by Jim Gillon, Martin France and many more of their colleagues at Gateshead Council. Housing, academia, corporates all thriving from this one project.

Unfortunately, Jez Crooks has since passed away, in January 2021, and wasn't able to see his dream come to life. But as recognition of his work, the boreholes that he inspired and which are drilled 150m down into the mines under Gateshead, are all now labelled with his initials JC. A fitting tribute to a man who had a vision...

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