

**TITLE OF REPORT:** Update on Gateshead District Energy Scheme

**Report of:** Strategic Director, Economy, Innovation and Growth

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### Summary

This report provides an update on the operation of Gateshead District Energy Scheme, by Gateshead Energy Company, since starting full operation in February 2018, and an update on Gateshead Energy Company's 5 year business plan.

### Background

1. Gateshead Energy Company (GEC) was incorporated in October 2015 specifically to manage and operate the Gateshead District Energy Scheme. The heat network was designed to expand to meet the full needs of all new development in and around Gateshead Town centre (See Appendix 1 for the full network masterplan)
2. In April 2016, GEC and the Council signed a 40-year concession contract, which sets out the terms of operation, in which the GEC leases assets from the Council and takes sole responsibility of operating and managing all technical and commercial activities.
3. In addition to the operation of the energy scheme, other objectives were set out at the time of incorporation, which included policy priority outcomes for residents:
  - Attracting economic growth
  - Cost savings for commercial customers in the borough
  - Reductions in fuel poverty for residents
  - Carbon reduction in the borough
  - Income generation for the Council
4. Regarding governance, GEC is a subsidiary of Gateshead Energy Holdings Ltd (GEH). This structure allows other ventures to be created under GEH, if required. Following CMT agreement to increase Board membership from three to five, two additional directors have been appointed. Current Board membership is as follows:
  - Andrew Marshall (Chair)
  - John Shiel (replaced Darren Collins, from 22 October 2020)
  - Mike Barker
  - Alison Dunn (from 26 November 2019)
  - Andrea Tickner (from 26 November 2019)
5. A Members Advisory Panel was established to advise the Board, and meets the week prior to all board meetings, to consider Board business and make recommendations. The Panel comprise Deputy Leader and three members on Transport and Environment Portfolio. GEC Board itself meets quarterly with arrangements in place where decisions

are needed between Board meetings. These are followed up by decision records presented at the subsequent board meeting.

6. Day to day operations are led by Jim Gillon, Energy Services Manager, acting as the nominated representative for GEC. Peter Udall, as Strategic Director for Economy, Innovation and Growth, acts the Council’s representative under the Concession Agreement.

## Operational Update

7. Key operational progress since commencement are set out below:
  - Heat and power supply commenced in Feb 2018, to core customers
  - From Summer 2018, Gateshead Leisure Centre, Library, Shipley Art Gallery and Talmudical College were connected, as well as 159 flats in Regent Court
  - From Oct 2019, GEC became the first small scale CHP generator to participate in the UK’s Balancing Mechanism, securing revenue from being available to turn on / off, at 30 mins notice, to balance the grid
  - Further new customers were completed to two additional Council buildings (PROTO and Baltimore House) and the first new build connection for heat/power to RIGA office building was completed in March 2020.
  - Most recently, the new Gibside Special School was connected to the heat network in early 2021
  - The current list of customers is provided in Appendix 1.
  - In addition, GEC has commercial connection offers issued to a number of potential customers:
    - Gateshead Quays (due 2024)
    - Mutli Storey Car Park (due 2022)
    - Speculative Office 2 (Baltic Quarter) – awaiting decision if this will be constructed
    - Park Rd, Shearlegs Rd, Gateshead Stadium, Gateshead Academy of Sport (due end 2021)
    - Freight Depot – (due 2022-2025)
  
8. In terms of network performance
  - GEC has met the terms of its concession agreement without any breaches and has performed within its performance standards, set out in the Concession Contract, for over 3 years.
  - The company continues to provide lower cost, lower carbon energy to customers – Council buildings, public venues and domestic housing, supporting organisations and individuals
  - Tariffs have been adjusted annually, both up and down, in line with inflation, ensuring customers remain on a discounted tariff compared to market rates. Annual tariff changes are summarised below, for heat and power. On the whole, heat price remains only 2% above starting tariffs. For power, price increases reflect the market increase across the UK, driven largely by increasing subsidy costs for renewables, grid resilience and distribution systems.

Energy tariff - annual change	2018/19	2019/20	2020/21	2021/22	Average change since 2018

<b>Power</b>	15%	-1%	-0.9%	14.4%	6.9% / year
<b>Heat</b>	9.0%	6.4%	-17.5%	4.2%	0.5% / year

- The only notable supply outages occurring since 2018 are as follows:
  - i. Nov 2019 – power failure to Baltic, caused by aging cable, acquired from Northern Powergrid. Power restored in under 3 hours
  - ii. June 2020 – heat failure / pipe burst to Baltic / Sage, due to latent defect. Outage for 7 days, but customers responsible for back up supply
  - iii. June 2021 – gas valve tripped, causing 18hr outage overnight, before fully resolved. No impacts reported from customers.
- All above resolved within timescales set out in customer supply agreement

### Financial performance of GEC

9. The cashflow position of GEC is made up of the following significant items (with example figures from 2019/20, pre-Covid):

- Revenues
  - Heat Sales – direct supply of heat to customers
  - Power Sales – direct to private customer
  - Grid exports – sold to the grid
  - Grid services – payment for grid balancing / back up services
- Costs
  - Concession charge – annual fee for use of network
  - Gas Costs – to run gas combined heat and power engines
  - Electricity costs – for balance of power
  - Business Rates – retained 100% by the Council
  - Maintenance costs – for plant and equipment
  - Service fees – payable to Council, for administrative services
  - Other minor costs

Revenue (£000s)		Expenditure (£000s)	
Heat	-374	Concession Charge	864
Power	-1,652	Gas	831
Grid Export and Services	-380	Electricity	151
Other	-7	Business Rates	183
		Maintenance	153
		Service Fees	168
		Other	349
<b>Total</b>	<b>-2,413</b>		<b>2,699</b>

10. Currently GEC does not own any assets. Rather, it leases the network and energy centre from the Council, under the Concession Agreement, which results in a concession charge payable to the Council.

11. GEC started trading before the network was fully completed. Due to the delay in GEC being able to supply and generate heat to customers, GEC built up losses during the first 2 years of operation. With full operation commencing in Year 3 (2018/19) in-year losses started to reduce and the total cumulative losses at the year 3 of 2018/19 was £1.606m.
12. For Year 4, 2019/20, pre-tax losses were £0.286m, of which £0.132m related to a downward adjustment on the fair value of forward purchased gas which is a result in the lower gas prices as a result of Covid-19. Total cumulative losses at the year 4 was £1.892m
13. In Year 5, 2020/21, the start of year forecast was for a further loss of loss of £0.125m. Covid-19 went on to significantly impact on the volume of energy supplied to customers, but in parallel, operating costs reduced also due to drops in wholesale energy prices. As a result of business impacts of Covid, the Company successfully applied for Supplier Relief from the Council which achieved a reduction in its Concession Charge. Draft end of year accounts for 2020/21 saw the company break even before the fair value adjustment, which now forecast's GEC's first annual profit, of £0.045m.
14. For context, the table below shows the total revenues, costs, and net profit/loss, for the past 5 years. This demonstrates that despite the early accumulated losses, GEC has now developed its cashflow position, to ensure revenues broadly cover all costs. The focus of business plan development is now to increase profits, to enable negative cash balances to be paid of, and then for profits to be able to be release to the Council, as dividends.

	2016/17 (£000s)	2017/18 (£000s)	2018/19 (£000s)	2019/20 (£000s)	2020/21 (£000s)
<b>Revenue</b>	-323	-1,165	-2,398	-2,413	-2,017
<b>Expenditure</b>	646	1,832	3,015	2,699	1,972
<b>Net (Profit)/ Loss</b>	<b>322</b>	<b>667</b>	<b>617</b>	<b>286</b>	<b>-45</b>

15. Its also reported that GEC generates significant income streams for Gateshead Council, from the following sources:
- Concession Charge
  - Business rates (which are retained 100%)
  - Service level agreement income
  - Energy cost savings to Council buildings
  - Interest charges
16. The table below summarises these income streams, which demonstrates that incomes received from GEC are now covering 95% of the annual financing costs of the scheme.
17. Looking forward, on the current scheme, the Council is forecast to receive ca. £20m in net surplus income from the scheme over 40 years. Based on the extensions / connections programmed over the next 3 years (see sections below), surplus income is forecast to increase further, to ca. £70m over 40 years. In addition to the income streams below, GEC if forecast to start significant profit generation from 2024/25 onwards, which will start to pay down the current negative cash balances completely by early next decade, after which GEC can start paying dividends back to the Council, to further support these income streams below..

Council income / costs (£000s)	2015/16	2016/17	2017/18	2018/19	2019/20
Concession charge	£0	£84	£505	£859	£859
Business rates	£0	£35	£85	£184	£184
SLA income	£0	£142	£131	£115	£117
Energy savings	£0	£75	£88	£168	£191
Overdraft income	£0	£3	£14	£55	£80
<b>Total income/savings</b>	<b>£0</b>	<b>£339</b>	<b>£824</b>	<b>£1,381</b>	<b>£1,431</b>
Capital cost	£6,764	£18,261	£23,875	£24,526	£25,526
Annual borrowing cost of main scheme	£237	£808	£1,292	£1,455	£1,507
<b>Net Cost / Benefit to council</b>	<b>-£237</b>	<b>-£470</b>	<b>-£469</b>	<b>-£74</b>	<b>-£75</b>

## 5 year Business Plan for GEC

1. To meet audit guidelines, GEC is required to have a long term business plan. The 5 year business plan was approved by GEC Board in July 2020. It restates and updates GEC's objectives in line with Council objectives, including the Thrive agenda and environmental goals around Climate Emergency and Zero Carbon status by 2030, air quality and sustainable transport. GEC's objectives are confirmed as follows:
  - Attracting economic growth (no change)
  - Cost savings for commercial customers in the borough (no change)
  - Reductions in fuel poverty for residents (no change)
  - Carbon reduction in the borough (updated with Zero Carbon 2030 target)
  - Improving Air Quality and Sustainable Transport (new objective)
  - Income generation for the Council (no change)
  
2. The Business Plan is then presented in six key sections. As an executive summary, its main objectives and targets are as follows, with progress over the past year highlighted in red text:
  1. *Profitability / income generation.*
    - First annual net profit by 2023 – **achieved by 2020/21**,
    - positive cash balance by 2028
    - first dividend payment to the Council 2028
  
  2. *Growth.*
    - Move to asset ownership structure of networks – **agreed Nov 2020**
    - Growth in energy supply of 85% (24 GWh/yr) by 2025
    - Plans confirmed for further 20% (5 GWh) by 2030
  
  3. *Cost savings*
    - provide £300k/yr savings to customers by 2025
    - Introducing new domestic electricity supply tariffs to 300 homes

#### 4. Carbon Reduction

- reduce network emissions by 20% by 2025
- Install 6MW water source heat pump – construction commenced May 2021
- Install or support customers to install 4MW solar PV – completion due end 2021
- By 2025, to adopt a Zero Carbon plan for 2030
- Support network of 300 home/commercial EV trickle charging points

#### 5. Regulation

- Continue full compliance with all energy, carbon and H+S legislation – full compliance
- Maintain zero accidents / injuries - achieved
- Become a “Heat Trust” supplier by 2022
- Compliance with Market Framework for Heat Networks, when this becomes legislation

#### 6. Development

- Develop programme of new energy networks
- Finance, build and operate the next energy network by 2025

### Network expansion / renewable energy

3. In line with the Business Plan, GEC is going through a major expansion to its network and energy plant, summarised as follows:
4. **Heat Network Investment Programme.** GEC has secured £5.9m of grant funding from this programme, and since April 2020, has been procuring and developing designs for:
  - Installation of a 6MW minewater heating scheme – this is potentially the UK's largest minewater heat scheme to date, and will extract minewater at 15 deg C from 150m depth, to provide up to 35% of the network's heat demand with renewable heat
  - Network connections to Gateshead Quays (due 2024) and Freight Depot (due 2022-2025), which will account for the majority of the planned 85% increase in network demand
5. In Nov 2020, the Council agreed a £7.4m commercial loan to GEC, to fund the balance of costs, for the £14m scheme. In May 2021, GEC Board approved commencement of construction, and the minewater system is due to be operational by March 2022
6. The 40yr business case for this scheme is forecast to fully recover the cost of financing the scheme, and will generate ca £30m in net surplus income over 40 years
7. **Public Sector Decarbonisation Scheme.** The Council has been successful in securing £7.5m in grants, to fund the following:
  - 1.25km heat and power network extension from Shearlegs Road, to Gateshead Stadium, to be complete by end 2021 (see blue network, in Appendix 1)
  - Up to 4MW of solar PV systems on brownfield land (Baltic Quarter, Gateshead Stadium) as well as at the Civic Centre (see Appendix 2, for urban solar park outline designs)

8. Whilst delivered by the Council, GEC will take on the ongoing heat/power supply agreement for the new sites, as well as providing connection points for urban solar parks, benefiting from the excess renewable power, which will further reduce reliance on gas-fired power generation.
9. Whilst the financial impact on GEC from this scheme is small, it further reduces GECs carbon emission. Significantly, it generates significant annual savings for the Council, of ca. £0.3m / yr, which over 40 years is forecast to generate a further £21m in income / savings to the Council.

### **Recommendation**

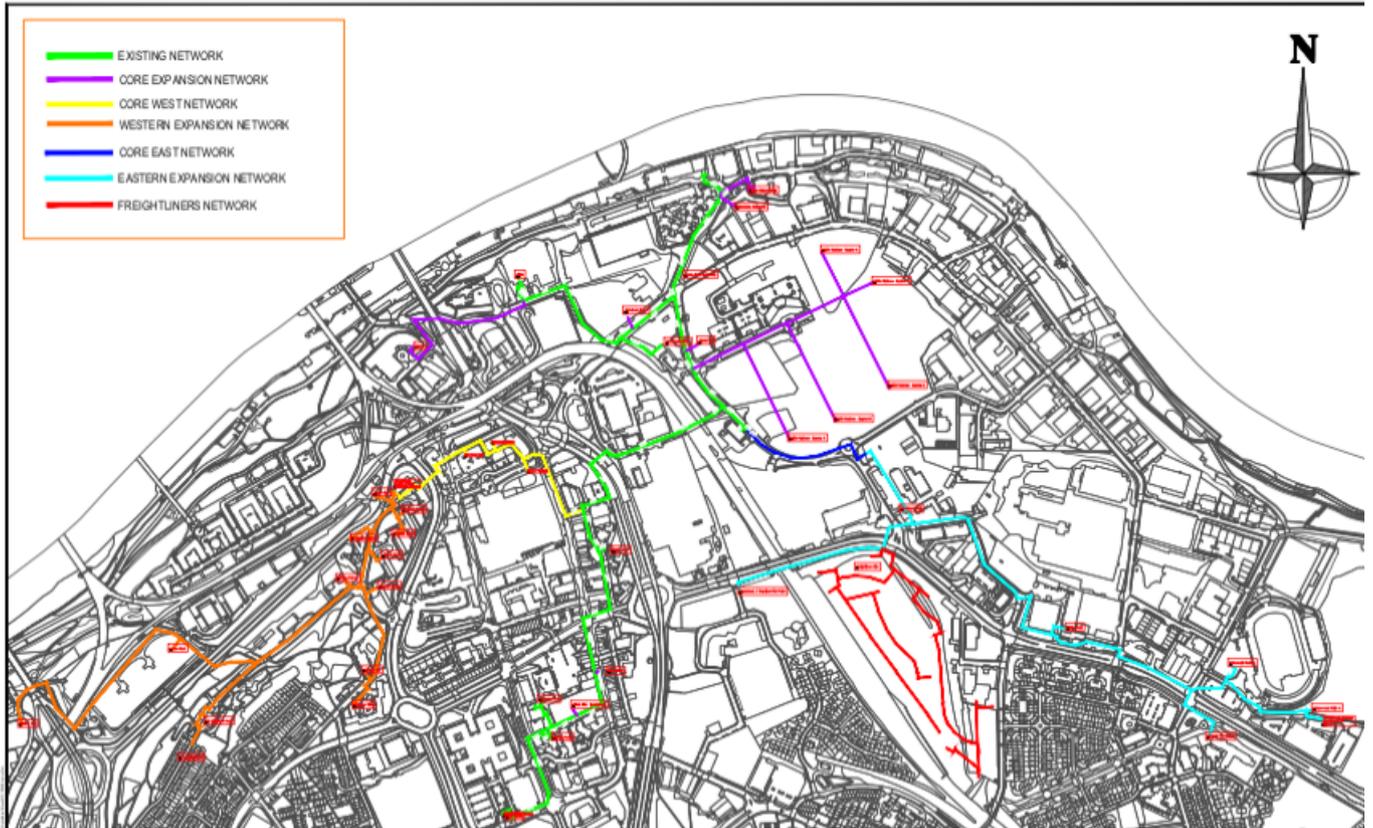
10. OSC is recommended to note the progress in this report, and provide any comments or queries for officers to consider and address.

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# Appendix 1. Gateshead District Energy Scheme – network masterplan

(Legend - green – current, blue – East Extension, purple, yellow, orange – future)



# Appendix 2. Proposed urban solar park, Baltic Quarter

