Briefing paper for the Audit and Governance Committee

Response to email titled 'Excessive Claims About Financial Benefit of the Incinerator and Significant Adverse Impact on Budgets'

This paper has been written for the Audit and Governance Committee at the request of the chair in response to recent letters from a member of the public regarding Gloucestershire County Council's ("GCC") trading of electricity from both the Gloucestershire Energy from Waste Facility ("the Facility") at Javelin Park and its corporate electricity.

Below is a brief explanation about how electricity is traded by GCC and detail of the prices achieved and supporting budgetary information.

1.1. Background

Residual waste contract

FCC Waste (Gloucestershire) Limited ("FCC") (the contractor was previously Urbaser Balfour Beatty (UBB), who were bought by FCC in June 2024) generates electricity at the Facility and sells it according to GCC's instructions.

Under the contract, FCC guarantees to produce approximately 116,000 Megawatt Hours (MWh) of electricity per annum. In reality, the Facility is generating more than this annually; and monthly electricity generation figures are publicly available on the FCC website[1][2].

As set out in the contract with FCC, GCC pays FCC the guaranteed power price, which is defined in the contract as:

> *"guaranteed price per MWh of Electrical Output in the relevant Contract Year, being £44.10 (Indexed) per MWh";*

Indexation has been applied to £44.10 annually and is currently £68.58 per MWh.

EDFE contract

GCC is unable to sell the electricity to the grid itself and has, therefore, entered into a tripartite contract with both FCC and EDF Energy Ltd (EDFE). Under the waste contract, GCC pays FCC for the electricity the Facility generates and instructs FCC to sell the electricity (on behalf of the GCC) to EDFE. Upon instruction from the Council (such details include the volume and price to sell at), EDFE then sells the electricity and GCC receives the revenue from the sale, minus an administrative charge by EDFE.

The EDFE contract was signed in 2022 and is for an initial period of 4[3] years with an option to extend its term for a further period of 3 years.

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[1] Previous month's performance data: https://gloucestershireefw.co.uk/performance-data

[2] Historic performance data: https://gloucestershireefw.co.uk/previous-performance-data

Corporate GCC electricity purchasing contract

GCC is also a purchaser of electricity for its own buildings, street lighting and schools (including academies) in the County. The Council currently buys c.30,000 MWh of electricity a year. GCC has a contract with West Mercia Energy (WME) a Central Purchasing Organisation (CPO) owned by a consortium of local authorities, buying on behalf of other public bodies. WME purchase's electricity on GCC's behalf. The WME Contract was signed in 2022, is co-terminus with the EDFE contract and is also for an initial period of 4[4] years with an option to extend for a further period 3 years.

Overall spend and consumption has reduced significantly over recent years (see Table 1) and has now plateaued corporately following completion of the refurbishment of Shire Hall and the LED Street Lighting programme. However, for street lighting, electricity consumption will continue to increase overall with the adoption of new housing and road developments. Increases in electric are also expected due to EV charging points and Air Source Heat Pump installations, but at selected corporate sites solar PV is being installed which will slightly reduce volumes for particular supplies.

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Table 1 – Annual consumption of electricity across GCC estate

Service Area	Financial year							
	18/19 (MWh)	**19/20[5] (MWh)**	**20/21[6] (MWh)**	**21/22 (MWh)**	**22/23 (MWh)**	**23/24[7] (MWh)**	**24/25 *(Apr-Aug24) (MWh)**	**25/26 (MWh)**
Streetlighting	12,386	10,143	9,764	9,129	9,139	8,596	2,500	Not Possible to provide as an actual
Corporate	6,920	7,111	5,481	6,376	6,338	6,406	1,811	
Schools	17,615	16,881	14,308	16,237	15,589	13,970	4,352	
Total	36,921	34,135	29,553	31,743	31,066	28,971	6,163	

Table 2 – Annual electricity generated by the Gloucestershire EfW Facility

Service Area	Financial year							
	18/19 [8](MWh)	**19/20[9] (MWh)**	**20/21 (MWh)**	**21/22 (MWh)**	**22/23 (MWh)**	**23/24 (MWh)**	**24/25 *(Apr-Aug24) (MWh)**	**25/26 (MWh)**
Total	0	56,143	131,532	130,276	127,898	131,591	56,717	Not Possible to provide as an actual

[5] Contract renewal and several schools opted out
[6] Covid caused demand destruction
[7] Contract renewal and a number of schools opted out
[8] Site not yet operational
[9] Site became operational in October

It is important to note that the electricity purchased on behalf of participating schools and academies is managed separately to the corporate electricity that GCC buys. WME determines the best time to purchase electricity for the County's schools based on the forecast provided by GCC.

As can be seen in Tables 1 and 2, the quantity of electricity GCC requires corporately is much less than that generated at the Facility and so GCC is classed as net "long[10]" in electricity.

Wholesale market price

Both gas and electricity market prices change on a daily (even hourly) basis, meaning the prices are volatile and can change (increase or decrease) quickly. Therefore, it is good industry practice for both the buying and selling of electricity and gas to trade (buy and/or sell) as far into the future as possible (meaning months and/or even years). This helps to limit any exposure to the volatility of daily market fluctuations and reduces financial risk.

As can be seen from Appendix 1 when Russia invaded Ukraine, the wholesale market price of electricity increased considerably.

Trading

GCC officers manage the sale and purchase of electricity using the Electricity Trading Protocol ("Protocol") approved by Cabinet in 2020. The fundamental principle of the Protocol is that each electricity transaction will be carried out for the purposes of reducing GCC's risk (as it exists at that time). Broadly, this involves trading electricity ahead, at a fixed price, so that the price volatility of selling at day-ahead prices is reduced.

GCC, where possible, co-ordinates electricity trading decisions, meaning that volumes of electricity produced and consumed will either: a) both be left floating (not fixed), or b) both be fixed at the same time.

GCC determines the best time to sell the electricity on the wholesale market. It requests quotes from both EDFE and WME for a set amount of electricity over a set time period (both determined by GCC) and if GCC deems the quotes to be acceptable, GCC instructs EDFE and WME to make the transactions and GCC receives the prices it agreed to at that point in time for an agreed amount of electricity over an agreed time period.

Electricity prices after the invasion of Ukraine

Electricity prices react to world events, politics and the amount of renewable electricity available as well as the price of other energy forms such as gas. With all these variables, the market is sensitive to changes to many external factors. When Russia invaded Ukraine in 2022, this had a significant impact on energy markets as energy security of many countries was at

[10] Being "long" means that GCC has a contractual surplus of electricity, such that it if the electricity commodity price went up GCC would receive more revenue and it if went down GCC would receive less revenue. Prior to Javelin Park becoming operational, GCC was "short" in electricity and if the electricity commodity price went up it would have cost more.

risk, which ultimately led to significant increases in the value of energy prices, including the wholesale electricity market.

When this occurred GCC was reprocuring its electricity contracts with both WME and EDFE; but was in a position towards the end of 2022 to trade future electricity. It was recognised at the time that the elevated market prices were likely to be temporary and so GCC fixed price for all the electricity generated by the Facility until the end of September 2025 which was as far ahead as could be traded at the time (see Table 3). Six months later, the price for period of 1st October 2025 – 31st March 2026 was available to trade and so GCC fixed the price again in order to maintain budget certainty until that date.

Table 3: Forward traded prices and dates of transactions

Season traded	PPA		Corporate Buying Contract (excluding electricity for schools and academies)	
	Average Annual Wholesale Price	Date traded	Average Annual Wholesale Price	Date traded
1st April 2022 – 31st March 2023	£64.58	Summer - 18th May 2021 Winter - 18th May 2021	£61.15	Summer - 20th May 2021 Winter - 20th May 2021
1st April 2023 – 31st March 2024	£169.27	Summer - 21st September 2021 Winter - 25th October 2022	£194.25	Summer - 22nd September 2021 Winter - 15th December 2022
1st April 2024 – 31st March 2025	£194.98	Summer - 25th October 2022 Winter - 25th October 2022	£231.80	Summer - 15th December 2022 Winter - 15th December 2022
1st April 2025 - 31st March 2026	£126.30	Summer - 26th October 2022 Winter - 24th April 2023	£152.00	Summer - 15th December 2022 Winter - 24th April 2023

Although it was anticipated that the corporate buying contract would be signed within 2 weeks of the PPA in 2022, this was not possible given delays that were caused by the need for resolving key commercial terms and accommodating unplanned leave by both parties. The corporate buying contract was signed in December 2022 and electricity was purchased by the council on 15th December 2022 for the same period as the electricity sold using the PPA.

The Council had sought to trade i.e. sell and purchase electricity in accordance with the Protocol, meaning, close co-ordination of the dates of the trade ((whilst recognising the trades under the PPA and the corporate buying contract were never going to be carried out simultaneously due to the nature of the contracts and the commercial processes that need to be followed) but late in the process it became apparent that this would not be possible.

Although the Protocol is clear that the Council should seek to co-ordinate the timing of its buying and selling activities in order to offset the risk of price variation, it also provides that such coordination is necessary only 'where possible'.

The buying prices for electricity purchased by the Council in December 2022 were different to the selling prices purchased in October 2022, due to the commercial terms and conditions of both the contracts and the volatility of the trading market prices. Nevertheless, the margin between them was deemed by the Council's Electricity Project Group to be acceptable, especially considering the risks and volatility of the market in view of world events.

Although the prices in 2022 were extraordinary, the impact of the higher unit rate will be evident until at least March 2026. Comparing the current average does not give a full picture of the income already received or the income due to be received for the next two financial years. The figures in Table 4 compare the cost of generating the electricity in the waste contract and the income that GCC will receive from the sale of this electricity to show the net income for each year.

Table 4 – Income for sale of electricity compared with cost to generate the electricity in the waste contract

Budget item	22/23	23/24*	24/25 Forecast*	25/26 Forecast
Gross income from sale of electricity	c.£8.5m	c.£23.7m	c.£24.9m	Currently not possible
Cost of Generation	c.£7.7m	c.£9.7m	c.£9.3m	Currently not possible
Net Income	c.£0.8m	c.£14m	c.£15.6m	Currently not possible

*This information has been provided to the member of the public as part of an earlier request

It is not possible to provide financial figures for 2025/26 for the following reasons:

1) Only 6 months' worth of electricity generation for 25/26 has currently been traded, therefore an annual figure cannot be confirmed.
2) Cost of generation cannot be confirmed as the price is agreed once the level of indexation has been applied. In accordance with the contract, the indexation has not yet been agreed as this takes place on a specific date.
3) The net income for 2025/26 cannot be determined if the gross income and cost of generation are not agreed.

The figures in Table 5 show the cost of the WME consumption contract.

Table 5: Cost of WME consumption contract

	23/24	24/25	25/26
Annual contract cost	£9.8m	£13.3m	Currently not possible

It is not possible to provide financial figures for 2025/26. In accordance with the contract these will be determined at the contract review point.

GCC is a consumer of electricity, but the consumption of electricity is unrelated to the Facility itself, is managed within existing budgets (as shown in Table 5) and should therefore not be considered when calculating any net income from the electricity generated at the Facility.

GCC accounts

The Statement of Accounts (SoA) is largely prescribed by CIPFA's Code of Practice so that the layout of the document is the same for every council allowing the users to compare like for like. It does not contain the details of specific contracts and therefore the numbers within this briefing paper cannot be linked.

However Private Finance Initiatives and Similar Contracts like this service concession are required to be shown within the SoA and Note 26 on page 82 on the following link provides a summary of the Energy from Waste Facility.

https://www.gloucestershire.gov.uk/media/azebo0n3/gcc-soa-2023-24.pdf

Appendix 1 - Historic wholesale electricity market prices

As can be seen from the graphs below, individual forward markets vary on a regular basis and the variation can be larger or smaller than the average depending on the market in question. Observing changes in an individual market or an overall average does not always give the required context behind price changes.