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| Board(s) | Dated: |
| Markets Board | 22 nd July 2024 |
| Subject: Energy Update | Public |
| Which outcomes in the City Corporation's Corporate Plan does this proposal aim to impact directly? | Leading Sustainable Environment |
| Does this proposal require extra revenue and/or capital spending? | No |
| If so, how much? | £ n/a |
| What is the source of Funding? | n/a |
| Has this Funding Source been agreed with the Chamberlain's Department? | n/a |
| Report of: The City Surveyor | For Information |
| Report author: Graeme Low | |

Summary

This report presents an update to the Markets Board on energy and carbon-related matters.

We have seen a sustained reduction in energy (37%) and carbon emissions (49%) since 2018/19 across all sites. The rate of this reduction has slowed as Markets recover from the pandemic. These reductions stem from a reduction in operational activity since 2018/19, but also due to energy demand reduction through interventions and the decarbonisation of the national electricity grid.

Continuing geopolitical events have seen delivered energy prices increase significantly and whilst prices have recently reduced, with further reductions anticipated for 24/25, volatility is likely to remain a feature of the energy market.

Our procurement strategy enabled the City Corporation to avoid the 30% surge in energy prices last autumn due to the conflict in the Middle.

The rebate on energy costs through the Power Purchase Agreement (PPA) started in January 2023 and has provided the markets with a £1.82M credit over the 2023/24 period.

Recommendation(s)

- Note the reduction in energy and carbon emissions consumption across all three markets since 2018/19.
- Note the anticipated reductions in unit rates of 39% for gas and 15% for electricity.
- Note the anticipated date for forecast prices for the October 24 – September 25 contract year.
- Note the forecast PPA rebate savings for 2023/24.

Main Report

Background

1. The City of London Corporation (City Corporation) procured a 4-year electricity and gas contract via LASER Energy Procurement Frameworks in October 2021. It was agreed at the Project Sub Committee and Finance Committee in October 2020 to adopt a Purchase in Advance (PIA) procurement strategy, allowing for flexible trading of the required energy volume in the months ahead of the contract start date and subsequent contract anniversaries. This contract is due to expire at the end of September 2025.
2. The use of the LASER framework enabled our existing energy supplier, Total Energies (TE, formerly Total Gas and Power) to be retained using this FTS-compliant framework. This enabled TE to act as a Sleeving supplier, as necessary to support the introduction of a Power Purchase Agreement (PPA). The City Corporation subsequently agreed terms on a 49.9 MW Solar farm (PPA) in January 2021. The data indicates our PPA has provided circa 70% of the City's electricity needs in 2023/24.
3. The Solar Farm commenced operation in January 2023. All City Corporation properties, including Smithfield, Billingsgate and New Spitalfields Markets have received credits as well as a unit rate reduction because of this PPA. The City Corporation has contracted with Voltalia UK Ltd. to provide the PPA service for a 15-year term.
4. The City Corporation implemented the Climate Action Strategy in April 2021. It aims to reach Net Zero Carbon (NZC) for the City Corporation scope one and scope two carbon emissions by 2027. This included non-tenanted energy consumption from the Markets. Tenants' emissions are included as part of our Scope 3 value chain which aims to reach NZC by 2040.
5. The Climate Action Strategy is currently in Year 4 of the programme. This includes a project to develop a new Monitoring and Targeting programme to reduce annual energy consumption by 5%. Additional capital projects have been identified and CAS funding could apply to the Markets, subject to the realisation of the financial return on investment.

Energy Procurement – new contract October 2025

6. Work is underway to procure a new energy supply contract with the aim of appointing a supplier by April 2025. This will allow a lead-in period in advance of our current contract expiring to enable the supplier to commence purchasing volume in advance to provide the best value as per paragraph 1.

Energy prices from October 2024

7. We are currently awaiting final prices from our broker, LASER for October 2024 – September 2025 which are expected around late summer 2024. We expect gas and electricity prices to decrease compared to the 2023/24 prices. Smithfield has benefited from a decrease in Citigen heat and chill

costs which change every financial year. The unit rate for heat decreased by 5% and the unit rate for chill decreased by 27%.

8. Our supplier has purchased 79% of our gas volume for the final year of the contract Oct 24 – Sept 25. Based on the current position our supplier is expecting a circa 39% reduction in the unit rate (not including standing charge) from the average unit rate cost of £0.073 in Oct 23 – Sept 24.
9. Our supplier has purchased 93% of our electricity volume for the final year of the contract Oct 24 – Sept 25. Based on the current position our supplier is expecting a circa 15% reduction in the unit rate (not including standing charge) from the average day unit rate of £0.271 per kWh in Oct 23 – Sept 24.

PPA

10. The City Corporation’s Power Purchase Agreement (PPA) commenced in January 2023. The agreement provides for a proportion of the total City Corporation electricity to be supplied at a significantly lower rate than the current wholesale market. This benefit is currently being shared with all City Corporation sites which are supplied through our corporate contract and delivered as a rebate on their energy costs.
11. The Markets have received £1.82M in PPA credits over FY 23/24. Table 1 highlights how this rebate is split between the three markets.

Table 1. PPA credits per site

| | March 23 - April 24 |
|------------------|---------------------|
| New Spitalfields | £732,707 |
| Billingsgate | £239,047 |
| Smithfield | £846,657 |
| Total | £1.82M |

12. PPA credits have significantly reduced since October 2023, and this was driven by a decrease in the wholesale cost of electricity and a decrease in PPA generation due to winter months having low daylight intensity. Figure 1 highlights this reduction compared with the market's electricity consumption. Figure 2 highlights the PPA generation variability throughout the 23/24 financial year.
13. Whilst PPA credits were reduced from October 2023, the reduction in wholesale electricity also meant that the unit rate on electricity bills also reduced. Despite this reduction in PPA credits, overall, the markets paid less for a kWh of electricity from October 2023.

Figure 1: Markets Electricity Consumption & PPA Credits

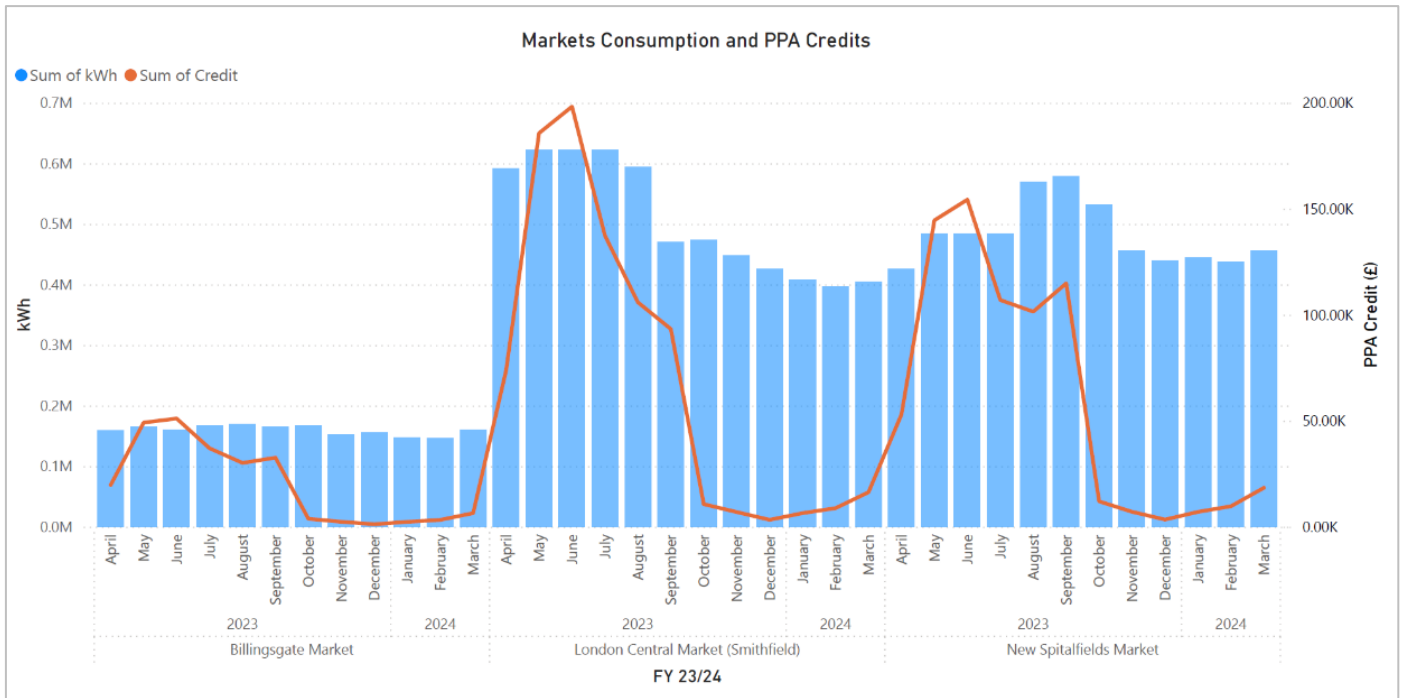
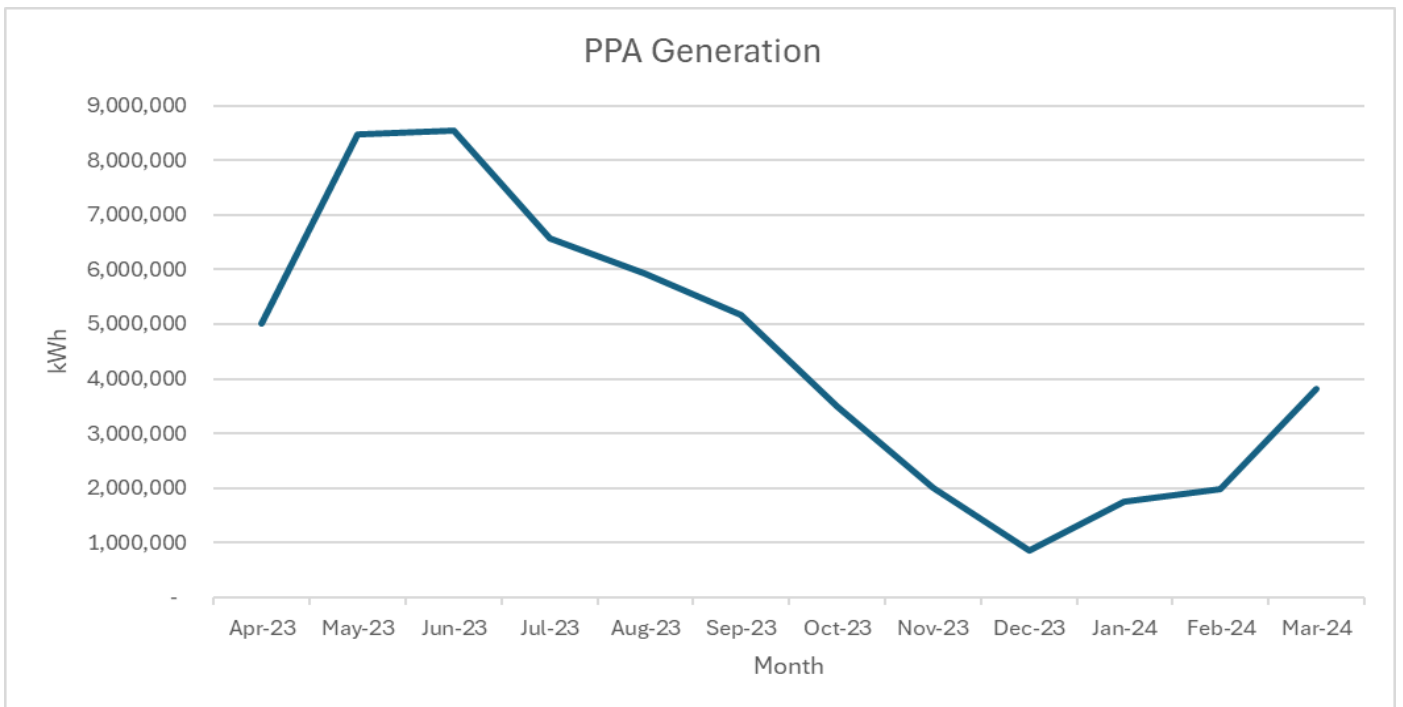


Figure 2. PPA Generation



Markets Energy and Carbon Performance

14. Table 2 below sets out the % reductions in **total** energy and carbon emissions (landlord & tenants - scopes 1,2&3) across the markets since 2018/19 (the baseline year for the City Corporation's net zero target) and over the past year. It should be noted that tenant energy consumption accounts for 72% of the total energy use across the markets.

Table 2. Total energy and carbon emissions reductions (including tenants)

| | 2023/24 compared to 2018/19 baseline | | 2023/24 compared to 2022/23 | |
|------------------|--------------------------------------|---------------------------------|-----------------------------|---------------------------------|
| | % reduction in energy use | % reduction in carbon emissions | % reduction in energy use | % reduction in carbon emissions |
| Smithfield | -51% | -59% | -20% | -8% |
| New Spitalfields | -13% | -36% | 0% | 7% |
| Billingsgate | -11% | -29% | -2% | 3% |
| Total | -37% | -49% | -11% | -2% |

15. Table 3 below sets out the % reductions in landlord only energy and carbon emissions (no tenant use - scopes 1&2) across the markets since 2018/19 (the baseline year for the City Corporation's net zero target) and over the past year.

Table 3. Landlord energy and carbon emissions reductions (no tenants)

| | 2023/24 compared to 2018/19 baseline | | 2023/24 compared to 2022/23 | |
|------------------|--------------------------------------|---------------------------------|-----------------------------|---------------------------------|
| | % reduction in energy use | % reduction in carbon emissions | % reduction in energy use | % reduction in carbon emissions |
| Smithfield | -69% | -71% | -45% | -35% |
| New Spitalfields | -40% | -56% | -26% | -22% |
| Billingsgate | -13% | -30% | 0% | 5% |
| Total | -60% | -64% | -36% | -26% |

16. Energy reductions are a result of a combination of reduced occupancy and energy efficiency improvements. Since 2018/19 all markets have had LED lighting upgrades. Over the last year Smithfield Market in the top 5 performing sites due to BMS upgrades and pump replacements. Whilst the closure of the Poultry market has had an impact the cooling towers and Animal By-Products facility have been moved to the main market.

17. New Spitalfields is showing a higher than anticipated reduction in energy use over 23/24 given there have been no significant energy saving projects or any change in occupancy. However, it has been noted that several tenants have undertaken works that have reduced energy use such as improved chillers and lighting. The potential for an issue with meter data collection is currently being investigated by the site and this will be included in the next report.

18. Total carbon emissions reductions since baseline year have been achieved across all markets driven by a combination of reduced energy demand and the national decarbonisation of the electricity grid. However, the increase in grid carbon factor from 22/23 to 23/24 has impacted the reduction in local-based carbon emissions despite reasonable reductions in energy use over the same period. This excludes the impact of the PPA. See appendix 1 for further details.

19. The Energy Team are currently developing a new Monitoring and Targeting programme that will seek to optimise energy use across the market sites with the objective of reducing annual energy consumption by at least 5%. The Energy Team have also participated in workshops to inform the design of the new market.

Corporate Risk

20. Energy price risk for City Corporation is currently managed within the City Surveyor's Senior Management Team. Whilst prices have seen significant reductions, they remain high when compared to 2020/21 and given ongoing geopolitical events price volatility is likely to remain a feature of the energy market. The introduction of the PPA from January 2023 has helped to significantly reduce price impact.

Corporate & Strategic Implications

21. **Strategic implications:** Energy performance is linked to resilience and helps ensure business continuity through reduced pressure on the energy infrastructure within the square mile. We support a thriving economy through ensuring environmental responsibility in this way. Our energy performance contributes to the Corporate Plan outcome leading sustainable environment through the reduction of CO_{2e} emissions and our commitment to procuring clean renewable energy.
22. **Financial implications:** The information in this report detail reductions in energy consumption and not against agreed budgets. Whilst prices have seen significant reductions, they remain high when compared to 2020/21 and given ongoing geopolitical events price volatility is likely to remain a feature of the energy market. While we are still waiting for the prices for October 2024 to September 2025's contract, LASER have advised approximately a 39% reduction in gas and 15% reduction in electricity costs. The PPA will continue to provide some measure of relief. Members should note for longer sustainable gains the focus will need to be on improving efficient use of energy, through targeted investment in energy saving measures.

Conclusion

23. The Energy Team and wider City Surveyor's department continue to support the markets with capital investment in works and building control to improve the services alongside delivering energy efficiency. Whilst energy costs continue to fall they are still higher than recent norms despite the impact of the PPA, and on-site demand reduction. We continue to plan with the Markets Team to advise tenants of this impact.

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