

<b>Board(s)</b>	<b>Dated:</b>
Markets Board	20 <sup>th</sup> September 2023
<b>Subject: Energy Update</b>	<b>Public</b>
<b>Which outcomes in the City Corporation's Corporate Plan does this proposal aim to impact directly?</b>	<b>5,11 &amp; 12</b>
<b>Does this proposal require extra revenue and/or capital spending?</b>	<b>No</b>
<b>If so, how much?</b>	<b>£ n/a</b>
<b>What is the source of Funding?</b>	<b>n/a</b>
<b>Has this Funding Source been agreed with the Chamberlain's Department?</b>	<b>n/a</b>
<b>Report of: The City Surveyor</b>	<b>For Information</b>
<b>Report author: Graeme Low</b>	

## Summary

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

We have seen a sustained reduction in energy and carbon emissions since 2018/19 across all sites. The rate of this reduction has slowed as Markets recover from the pandemic. Carbon dioxide equivalent (CO<sub>2</sub>e) reductions from operational activity have also reduced significantly since 2018/19 due to demand reduction and the decarbonisation of the national electricity grid.

The impacts of the conflict in Ukraine and an increase in demand has seen delivered energy prices increase significantly. Our procurement strategy has been designed to provide a market reflective price and overseen by our energy brokers, LASER. The rebate on energy costs through Power Purchase Agreement (PPA) started in January 2023 and has started to offset some of the increased energy costs.

### Recommendation(s)

- Note the reduction in energy and carbon emissions consumption across all three markets.
- Note the increase in energy costs incurred for 2022/24 and the forecast increase in energy costs for 2023/24.
- Note the forecast PPA rebate savings for 2023/24.

## Main Report

### Background

1. The City of London Corporation (City Corporation) entered into a new four-year electricity and gas contracts via LASER Energy Procurement Frameworks in October 2021. It was agreed at 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 approach was similar to the preceding contract with Mitie Energy.

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 OJEU 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. Our PPA will provide over 60% of the electricity needs of the City Corporation from a Solar Farm near Blandford Forum in Dorset.
3. The Solar Farm commenced operation in January 2023. All City Corporation properties, including Smithfield, Billingsgate and New Spitalfields Markets will receive a percentage electricity from this Solar Farm in the coming months. The City Corporation have 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 2 of the programme, with several actions such as Energy Audits having been completed to identify interventions that will help to reduce energy and carbon emissions. Capital funding has been provisionally earmarked to support these capital interventions and this funding could be applicable to the Markets.

### **Markets Energy Performance**

6. Overall energy consumption has reduced by 32% across the markets over 2022/23 compared to 2018/19. Reductions have been achieved across all markets, but Smithfield accounted for 85% of the total reduction. This has mainly been a result of a combination of reduced occupancy and energy efficiency improvements supported by the Energy Team. Energy consumption over 2022/23 remained static overall. Billingsgate usage reduced by a notable 9%. Smithfield gas and heat consumption reduced by 15% and 23% respectively but cooling increased by 67% due to a building controls maintenance issue which is being addressed. New Spitalfields consumption was slightly higher. Please see appendix 1 for further details.
7. Overall carbon emissions have reduced by 43% across the markets over 2022/23 compared to 2018/19 (the baseline year for the City Corporation's net zero target). Reductions have been achieved across all markets driven by a combination of reduced energy demand, improved energy efficiency, and the national decarbonisation of the electricity grid. Carbon emissions

reduced by 7% over 2022/23 compared to 2021/22. See appendix 2 for further details.

8. The City Surveyor’s Surveying and Engineering Projects Team have in recent years delivered the following projects through the City Corporation’s CWP (Cyclical Works Programme) which will support lower energy consumption:
  - Smithfield West Market BEMS (Building Energy Management System) replacement.
  - Smithfield West Market secondary pump and speed control replacements.
  - Smithfield East Market trader corridor fan upgrades.
  - Smithfield car park (lower level): replacement lighting (with LED) and smart controls.
  
9. The Energy Team continue to provide support to Smithfield market regarding the operation and maintenance of the Building Energy Management System. The Energy Team have also participated in workshops to inform the design of the new market.

### **Energy Procurement**

10. Despite energy consumption remaining overall the same over 2022/23 compared to 2021/22 the cost of energy increased by 95%, resulting in c.£2.3mil additional costs. This was due to the increases in the wholesale market price of all forms of energy. We have forecast the cost of energy for 2023/24 based on energy consumption for 2022/23 and based on current energy price projections. The forecast indicates a further 76% increase in energy costs, mostly as a result of higher electricity prices. It should be noted that Smithfield is benefiting from lower forecast energy costs through the City Corporation’s tariff agreements with Citigen for heating and cooling. Please see appendix 3 for further details.
  
11. 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. The Markets rebate for the first two months of the PPA is £130,133 and we forecast the rebate over the first 12-months to be £2,483,534 equating to c.30% reduction on the projected electricity costs – see below table.

Table 1. Actual and forecast PPA rebate for 2023

	Jan-23&Feb-23	Jan-23 to Dec-23
New Spitalfields	£45,827	£958,911
Billingsgate	£17,453	£296,803
Smithfield	£66,853	£1,227,821
<b>Total</b>	<b>£130,133</b>	<b>£2,483,534</b>

## Corporate Risk

12. Energy price risk for Corporation is currently managed within the City Surveyor's Senior Management Team. Whilst prices remain high for the year ahead, the introduction of the PPA from January 2023 has helped to significantly reduce price impact. This has moved the risk from red to amber for the first time. Mitigating measures in place include:
- Regular meetings with LASER on purchasing strategy and risk minimisation.
  - Regular progress meetings with Voltalia on the performance of the PPA Solar Farm.

## Corporate & Strategic Implications

13. **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 helps to shape outstanding environments through the reduction of CO<sub>2e</sub> emissions and our commitment to procuring clean renewable energy. In this way our energy performance helps shape outcomes 5, 11 and 12 of the Corporate Plan.
14. **Financial implications:** The information in this report detail reductions in energy consumption and not against agreed budgets. Recent significant increases in the wholesale cost of electricity and gas has meant that whilst consumption has decreased the overall energy cost for most services has risen. Energy costs are projected to substantially increase further over the next year due to external factors, although the PPA agreement is expected 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

15. 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. Energy costs are expected to rise significantly in the coming year 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.

## Report author:

### Graeme Low

Head of Energy and Sustainability  
City Surveyor's Department  
E: graeme.low@cityoflondon.gov.uk