

Committee(s)	Dated:
Barbican Estate Residents Consultative Committee	20 th September 2022
Subject: 2022/23 Electricity price Forecast	
Which outcomes in the City Corporation's Corporate Plan does this proposal aim to impact directly?	2,4,5,11
Does this proposal require extra revenue and/or capital spending?	N/A
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?	No
Report of: City Surveyor	For Information
Report author: Graeme Low	

Summary

This report presents the view of expected electricity costs for CoL BEO housing sites. Prices are yet to be finalised due to uncertainty around the start date for the Power Purchase Agreement. If, as expected this begins operating in December the likely increase in electricity costs can be contained. If, the PPA is delayed further the impact will increase, though the unit rates are expected to remain below the published price cap for October.

Recommendation(s)

- Note the increase in unit rate costs expected in the scenarios.
- Note the PPA will provide significant budget relief.
- Note that consumption and costs will be validated via the new procurement contract with Team Energy Auditing Ltd., the City's current energy monitoring software.
- Note continued work towards carbon reduction across the Barbican Residential Estate.

Main Report

Background

1. Electricity market prices have increased by approximately 700% since December 2021. As part of an agreed approach to managing price risk, the City Corporation purchases energy in advance through our Broker, LASER Energy and their publicly procured framework. This helps to mitigate the risk of purchasing during the market peaks by procuring small amounts over a given period. To date 68% of our volume has been procured for the 12 months ahead, the remainder is expected to be filled by the power purchase agreement.
2. The Barbican Residential Estate has a significant power supply to communal areas (including heating). The City of London Corporation procures this and passes back the cost to residents through recharges. Usually, electricity prices are fixed ahead of the contract anniversary on 1st October, so that there is certainty on cost and removes the need for account reconciliation.
3. Alongside the Supply agreement, the City of London Corporation have entered into a 15-year agreement to purchase approximately 54,347 MWh per annum from South Farm Solar Ltd. This figure reduces slightly with performance each year and by the 15th year the output is expected to

be 50,664 MWh. This currently represents approximately 63% of the Corporations electricity volume, including the Barbican Residential volume.

4. The electricity from this Power Purchase Agreement (PPA) is provided at a set price which increases after the 2nd year of operation in line with CPI.
5. Via the Climate Action Strategy, Surveys have begun across the Barbican Residential site. A number fabric measures have been reviewed with the likely cost, kWh and CO₂ savings identified. Further surveys are expected to begin in the coming weeks, looking at the landlord areas in more detail.

Rising Markets

Chart 1. Rising Electricity Prices Since December 2021 (05/09/2022)

October 22 Annual UK Baseload Electricity (£/MWh)



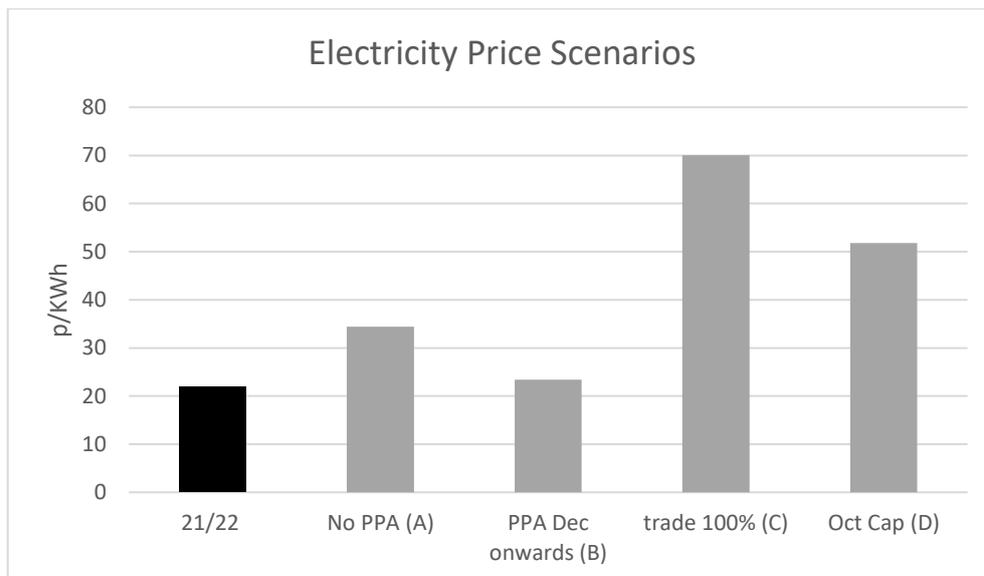
6. Chart above demonstrates the importance of the PPA. It shows how much electricity prices have risen since December of 2021 and demonstrates that current prices have reached around the £700/MWh mark for the October 2022 period. Under the PPA our purchased commodity price (excluding non-commodity costs) will be £41.68/MWh for the first two years. Approximately 63% of our volume will be provided once it reaches its Commercial Operations Date.
7. The PPA start date has recently been pushed back, due to the District Network Operator delaying works related to the connection of the solar farm to the grid. This is expected to Continue until December, but there is a risk it is delayed further. This has regrettably left some open volume that we now need to secure through the market. We are currently engaged in this process and therefore prices remain subject to variation.

Expected Tariff price October 2022 -September 2023

8. As the PPA is yet in operation we have looked at several scenarios:

- **Scenario A** provides the position if the PPA is delayed by full 12 months, an unlikely scenario. In this scenario, our previous hedged trades will combine with the price achieved for the open volume. Based on prices taken on 31/08. Scenario A is expected to provide a unit rate of close to 34.3p/kWh. This represents a 57% increase on the 21/22-unit rate.
- **Scenario B** provides the position if the PPA is delayed until December, which is our current expectation. In this scenario, the full benefit of the PPA is diluted slightly by trades needed to fill in the missing generation. In this situation a unit rate close to 23.4p/kWh is expected. This represents a 7% increase on 21/22-unit rates.
- **Scenario C** provides the hypothetical position of purchasing all of the electricity volume at current market rates, this is to demonstrate the benefit of the purchase in advance approach. This would increase rates by 220% against 21/22 figures.
- **Scenario D** provides the current domestic energy price cap from October 2022. Again, this is provided for reference as the landlord supplies to the Barbican are not subject to these price caps. The domestic price cap would see unit rates increase by 137%

Chart 2. Electricity price scenarios



9. Budgets have been provided by Total Energies and represented a hybrid of 2019 and 2020, where metering data is not currently available. The budget spreadsheet in the appendix has used a conservative unit rate for forecasting of 50p/kWh due to continuing volatility in the market. This does not include REGO prices, only an estimate is placed in at this time.

10. The Energy Team will update the sites as best we can on the “live date” and process of the PPA Further.

11. The Energy and Sustainability are hosting a session in September to discuss invoice validation. Team Energy Auditing Ltd. will be taking over from Mitie in the validation and verification of invoices in 22/23. The Team event will provide further details.

Corporate and strategic implications

12. Financial implications: The likely impacts of higher energy prices will have a significant impact on both residents and Commercial tenants at the Barbican Residential Estate. The City Corporation are working to mitigate the impacts of these rises through the introduction of a Power Purchase Agreement and a purchase in advance approach.

Conclusion

13. Whilst we expect there to be a rise in electricity costs for residents at the Barbican, the introduction of the PPA will go far to mitigate the effects. However, this remains delayed, and uncertainty remains on the final date it will become operational. If as expected, the PPA is operating by December, the effect is likely to be minimal, whilst the hedged position on electricity purchases to date, will also help in the event further volume is needed to cover the gap from the PPA's delayed start.

Report author

Graeme Low

Head of Energy and Sustainability, City Surveyor's Department

E: graeme.low@cityoflondon.gov.uk