

Manchester City Council Report for Information

Report to: Environment, Climate Change and Neighbourhoods Scrutiny Committee – 7 December 2023
Executive – 13 December 2023

Subject: Large Scale Renewable Energy Generation – Power Purchase Agreement

Report of: Deputy Chief Executive and City Treasurer

Summary

This report provides an update on the progress of the City Council’s proposal to purchase renewable energy supplies via a Power Purchase Agreement (PPA) to ensure the Council has a long-term, cost-effective supply of renewable energy to meet its energy needs and achieve its Zero Carbon objectives to reduce the Council’s CO₂ emissions.

Recommendations

1. The Environment, Climate Change and Neighbourhoods Scrutiny Committee is recommended to note and comment on the contents of the report.
 2. The Executive is recommended to consider and note the contents of the report.
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Wards Affected: All

Environmental Impact Assessment - the impact of the issues addressed in this report on achieving the zero-carbon target for the city	Action 1.3 of the Council’s Climate Change Action Plan 2020-25 targets 7,000 tonnes of annual CO ₂ savings. The Plan sets out the actions that will be delivered to ensure that the Council plays its full part in delivering the city’s Climate Change Framework 2020-25 which aims to half the city’s CO ₂ emissions over the next 5 years.
Equality, Diversity and Inclusion - the impact of the issues addressed in this report in meeting our Public Sector Equality Duty and broader equality commitments	

Our Manchester Strategy outcomes	Contribution to the strategy
A thriving and sustainable city: supporting a diverse and distinctive economy that creates jobs and opportunities	The transition to a zero-carbon city will help the city's economy become more sustainable and will generate jobs within the low carbon energy and goods sector. This will support the implementation of the Our Manchester Industrial Strategy and Manchester Economic Recovery and Investment Plan.
A highly skilled city: world class and home-grown talent sustaining the city's economic success	Manchester is one of a small number of UK cities that have agreed a science-based target and is leading the way in transitioning to a zero-carbon city. It is envisaged that this will give the city opportunities in the green technology and services sector.
A progressive and equitable city: making a positive contribution by unlocking the potential of our communities	Transitioning to a zero-carbon city can help to tackle fuel poverty by reducing energy bills. Health outcomes will also be improved through the promotion of more sustainable modes of transport and improved air quality.
A liveable and low carbon city: a destination of choice to live, visit, work	Becoming a zero-carbon city can help to make the city a more attractive place for people to live, work, visit and study.
A connected city: world class infrastructure and connectivity to drive growth	A zero-carbon transport system would create a world class business environment to drive sustainable economic growth.

Full details are in the body of the report, along with any implications for

- Equal Opportunities Policy
- Risk Management
- Legal Considerations

Financial Consequences – Revenue

The requirement for ongoing external technical support means that costs are being incurred through the early stages of agreeing the PPA contract, and these costs are funded from existing budgets.

Once entered into, the PPA costs will form part of future years' energy revenue budgets. Details of the accounting treatment of the proposed PPA can be found in Part B.

Financial Consequences – Capital

None

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Background documents (available for public inspection):

The following documents disclose important facts on which the report is based and have been relied upon in preparing the report. Copies of the background documents are available up to 4 years after the date of the meeting. If you would like a copy, please contact one of the contact officers above.

Manchester City Council Climate Change Action Plan 2020-25:
[2020-25 MCC Climate Change Action Plan \(Refresh 2022\)](#)

Executive Report, January 2023: Large Scale Renewable Energy Generation Solar Farm Purchase:
[Large Scale Renewable Energy Generation Solar Farm Purchase Part A.pdf \(manchester.gov.uk\)](#)

Executive Report, June 2023: Large Scale Renewable Energy Generation:
[Large Scale Renewable Energy Generation - Power Purchase Agreement \(Part A\)](#)

1.0 Introduction

- 1.1 The Council's Climate Change Action Plan (CCAP) has a science-based target calculated by the Tyndall Centre for Climate Research to reduce the Council's direct emissions of CO₂ by 41% over the five-year period of 2020-25. In addition, the Council has committed to be zero carbon by 2038 at the latest, also based on the science-based targets developed by the Tyndall Centre.
- 1.2 The Council's CCAP includes a commitment to research and identify options for large scale renewable energy generation to deliver either a solar asset and / or suitable Power Purchase Agreements (PPAs) to achieve a traceable, renewable energy source to deliver CO₂ savings and maximise long-term benefits for the Council.
- 1.3 A Power Purchase Agreement (PPA) is the direct purchase of renewable energy. Investment in a PPA enables additional renewable power generation to be created and added to the national grid. The investment in a PPA is traceable directly to specific renewable energy projects such as wind and solar farms across the UK and guarantees supply of renewable energy over a long-term supply agreement, typically between 5 and 15 years.
- 1.4 This report sets out the background to the work undertaken to date including an assessment of the Council's energy demand and relevant details of progress made to purchase a PPA for supply of energy to the Council.

2.0 Background

- 2.1 In January 2022, the Executive granted delegation for the Deputy Chief Executive and City Treasurer, in consultation with the Leader, Executive Member for Finance and the Executive Member for Environment to negotiate for the purchase of a solar asset / PPA and any associated corporate documentation to establish a Special Purpose Vehicle if required.
- 2.2 The volatility in the energy markets linked to the war in Ukraine, combined with uncertain government energy policy over the summer and autumn of 2022 including a likely Government ban on new solar farm developments (since abandoned), plus the financial volatility arising from the UK Government's short-lived financial policies of September 2022 have all contributed to a volatile market over the past 18 months.
- 2.3 In common with many other local authorities, the Council has felt exposure to the volatile energy markets over the past three years and is keen to obtain a more secure energy pricing framework. Council electricity contracts include the city council estate plus schools and some other facilities. The Council's spend on electricity for its own estate (including buildings, vehicles and streetlighting) over the past four financial years is as follows:

2020-21 electricity contract value: approx. £7m.

2021-22 electricity contract value: approx. £10m.

2022-23 electricity contract value: approx. £18m.

2023-24 projected contract value: est. £15m.

- 2.4 Variations are due to a range of factors including reduced prices and consumption during lockdown periods due to Covid-19, the market volatility referred to in section 2.2 above and price reductions experienced in the period commencing September 2023. Despite prices having dropped significantly in the recent period, this project to secure a long-term renewable energy supply gives greater energy security and a degree of long-term protection on future energy prices.
- 2.5 In November 2022, officers identified a potentially suitable large scale solar PV facility available for purchase and submitted an initial non-binding offer to the developer. A report on the potential purchase was made to Executive in January 2023. However, during the Council's detailed assessment of the proposition, the Council took the decision to withdraw from this potential purchase as the site did not pass our due diligence thresholds for viability and therefore did not offer a sound investment opportunity for the Council.
- 2.6 In June 2023, Council officers reported to Executive on work to explore suitable renewable energy supply options considering the available options for an asset purchase, such as a solar farm, or purchase of renewable energy via a Power Purchase Agreement (PPA) taking advice from external advisors including the Tyndall Centre for Climate Research. Advice taken from Tyndall is that:
- MCC will likely **remain within its science-based carbon budget by 2025** through its existing programme of actions to reduce CO₂ emissions across our buildings, street-lighting, and vehicles
 - **Planning and action is needed now** to ensure that the 2025-30 carbon emissions target is not exceeded
 - Using a solar PV farm or **a PPA is recommended to meet carbon targets** where additional renewable electricity generation is created by MCC and applied to reduce electricity related emissions
- 2.7 By entering into a PPA, the Council's commitment to purchase power, gives a developer certainty of a guaranteed off-taker which helps them to fund the creation of a new renewable energy asset and supply to the grid, thereby reducing the Council's CO₂ emissions for the production of the energy that the Council uses to supply its corporate estate, to charge its electric vehicles and power its streetlights. The Council have confirmed with its advisors, including the Tyndall Centre for Climate Research, that the purchase of a PPA is a valid, and indeed essential, contribution towards the Council meeting its Zero Carbon 2038 objectives between 2025/26 and 2038.
- 2.8 In the Council's CCAP Quarter 1 report published in July 2023, we stated that data from the National Grid is showing a slowdown in the decarbonisation of the national electricity supply which introduces additional risks for the Council in achieving its Zero Carbon 2038 targets. Further to this, in the latest Council CCAP Quarter 2 report in October 2023, we noted that the National Grid has

been using more natural gas in its electricity supply. Therefore, overall, since the Council's science-based pathway relies to a significant extent on the national electricity grid decarbonising, this presents a risk for the Council in achieving its own Zero Carbon 2038 targets.

- 2.9 To ensure that the Council received appropriate support and expertise in relation to the securing of a suitable renewable energy supply, MCC sought commercial and technical advice from EY (Ernst & Young) on the options and viability of purchasing a fixed asset such as a solar farm or purchasing renewable energy through a PPA. Given the availability of suitable sites, risks and benefits, and the availability of sites and PPAs on the market, in June 2023, the Executive agreed that the Council's preferred option is to identify an appropriate PPA opportunity to meet its power requirements and gave its approval to commence a procurement process for a PPA supplier.

3.0 Council Energy Purchasing Policy and Integration with PPA Product

- 1.1 MCC's Energy Demand Assessment has been used to inform the sizing of the PPA the Council is procuring. The Energy Management Unit (EMU) and Performance, Research and Intelligence teams are continually reviewing the forecasted electricity use on an ongoing basis and any emerging changes to the Council's energy demand will be factored in and reported on through the work around carbon budgeting and forecasting.
- 1.2 As part of its Climate Change Action Plan, the Council have a comprehensive programme of actions to decarbonise its own buildings. These works are brought forward on an annual basis using Council funding and are also adapted to maximise available government grants. These actions have an impact on the Council's energy demand and the impacts are monitored over time with energy demand projections amended accordingly. For example, the energy generation of roof top solar PV installations on Council buildings will vary in operation from original projections and building retrofit measures need to be monitored to gauge their actual impacts on energy usage versus projections at design stage. Also, some decarbonisation measures, particularly the decarbonisation of heat, can lead to an increase in demand for electricity as caused by switching from gas to electricity. These impacts on future energy demand are taken into account in revised future energy demand projections.
- 1.3 EMU and Procurement have recently implemented a new, bespoke electricity framework and associated supply contract provision from October 2023. The framework agreement made specific provision to accommodate PPAs of varying types, including mandating a flexible contract product, which is the only contract type which can accommodate PPAs.
- 1.4 The Council's current energy supplier has confirmed their commitment to working with MCC to manage the PPA in relation to integration with the existing retail supply agreement. This includes, but is not limited to, ensuring they can conduct the necessary shaping and balancing services to offset our usage profile against the expected PPA yield.

- 1.5 The Group Manager within the Energy Management Unit will ensure that contract management arrangements for the electricity supply contract include ongoing liaison regarding the PPA to ensure that these two supply arrangements work seamlessly.

4.0 Securing of a Power Purchase Agreement

- 4.1 Following on from the decision in February 2023 not to progress the acquisition of the solar farm, procurement activity to secure a suitable Power Purchase Agreement (PPA) opportunity is now concluding. The procurement was led by the Council with technical, financial and market advice being provided by Ernst & Young (EY), alongside DLA Piper who were advising on legal and contractual matters.
- 4.2 Following assessment of the current market conditions and lessons learned from the experience of others (including the City of London as the only other Council currently with a form of PPA in place) it was decided that a 'competitive process with negotiation' was the most appropriate way in which to secure the best possible opportunity for the Council.
- 4.3 Prior to the formal commencement of procurement activity, a market engagement session was hosted by the Council and EY to make potential bidders aware of the opportunity which the Council was to put to market and our requirements for the PPA we were looking to secure. Over 30 different organisations were on the call, with a further 50 receiving notification of Manchester's intention to advertise the opportunity.
- 4.4 On 28th June 2023, the Request to Participate (RtP), was posted on the Chest, which is the North West's Public Sector procurement portal. All attendees of the market engagement session were advised of the publication of the opportunity, which was advertised for a period of one month. On conclusion of the RtP phase, submissions were made by potential suppliers to the Council.
- 4.5 It is to be noted that the Council's requirements for the PPA are prescriptive in terms of volume and timeline and could have potentially resulted in the lower than anticipated interest in the opportunity. However, from discussing with colleagues in the private sector, who regularly secure PPAs, albeit at smaller scale requirements than the Manchester opportunity, they have stated that they do find similar patterns of interest i.e. from a significant number of parties wanting to understand what the client requirements are but then this resulting in a limited number of firm proposals being submitted.
- 4.6 The Invitation To Tender (ITT) was advertised in accordance with the Public Contracts Regulations (PCR) 2015 for parties to complete their full submissions, along with provision of supporting evidence for review. A multi-disciplinary evaluation panel made up of officers from City Policy, Commercial Governance, Energy Management Unit, Financial Management, Health & Safety and Procurement, along with technical input from the Council's advisors, reviewed and scored all the proposals upon submission.

- 4.7 Following the completion of assessment, two proposals were discounted from the process due to asset unavailability.
- 4.8 In addition, a thorough assessment of the potential financing and structures of the bidders were undertaken as part of this process. This was to gain a full understanding of the party which the Council would be potentially contracting with and to gain an understanding of the origin of the funding source to develop the asset. All bidders had slightly different funding structures, with some already having secured capital from private and / or public sector investors, with others having offers of private finance ready to access as soon as they were selected as preferred bidder for the opportunity. Furthermore, given that the Council is a signatory to the Fair Tax Declaration, facilitated through the Fair Tax Foundation, the Council required absolute assurance that the parties being engaged with are compliant with the terms of the declarations i.e. UK domiciled for tax purposes.
- 4.9 The parties that were successful through the ITT then moved into the negotiation phase and final tender stage. Following conclusion of this negotiation stage, a preferred bidder has now been selected with details of the bidder and the PPA opportunity outlined in the Part B report as this is commercially sensitive.
- 4.10 Following the conclusion of the mandatory standstill period and subject to Council approval, the Council will formally announce the bidder which it will be contracting with on the PPA arrangement in early January 2024. Regular updates on the development of the asset which the PPA will come from will be submitted via the Council's Zero Carbon governance arrangements, with progress reports being presented to the Executive and appropriate Scrutiny Committee(s) on an annual basis as part of the Council's Zero Carbon reporting.

5.0 Recommendations

- 5.1 Recommendations are set out at the beginning of this report.

6.0 Contributing to a Zero-Carbon City

Action 1.3 of the CCAP targets 7,000 tonnes of annual CO₂ savings and is a key action to ensure that the Council plays its full part in delivering the city's Climate Change Framework 2020-25 in reducing the Council's emissions in line with our science-based targets developed by the Tyndell Centre for Climate Research.

7.0 Contributing to the Our Manchester Strategy

(a) A thriving and sustainable city

The transition to a zero-carbon city will help the city's economy become more sustainable and will generate jobs within the low carbon energy and goods

sector. This will support the implementation of the Our Manchester Industrial Strategy and Manchester Economic Recovery and Investment Plan.

(b) A highly skilled city

Manchester is one of a small number of UK cities that have agreed a science-based target and is leading the way in transitioning to a zero-carbon city. It is envisaged that this may give the city opportunities in the green technology and services sector.

(c) A progressive and equitable city

Transitioning to a zero-carbon city can help to tackle fuel poverty by reducing energy bills. Health outcomes will also be improved through the promotion of more sustainable modes of transport and improved air quality.

(d) A liveable and low carbon city

Becoming a zero-carbon city can help to make the city a more attractive place for people to live, work, visit and study.

(e) A connected city

A zero-carbon transport system would create a world class business environment to drive sustainable economic growth.

8.0 Key Policies and Considerations

(a) Equal Opportunities

There are no equal opportunity issues to note that should arise from the content of this report.

(b) Risk Management

The key risk is to successful delivery of the Council's Zero Carbon 2038 objectives and remaining within the science-based carbon budgets set by the Tyndall Centre.

(c) Legal Considerations

The legal issues are as set out in part B of this report.

Legal Services together with their appointed external legal advisors, DLA, have provided support and advice regarding this project,