

**Manchester City Council
Report for Information**

Report to: Environment, Climate Change & Neighbourhoods Scrutiny Committee - 5 December 2024

Subject: Manchester Power Purchase Agreement – Update Report

Report of: City Treasurer

Summary

To provide a progress report on the Council's renewable energy Power Purchase Agreement (PPA).

Recommendations

The Environment, Climate Change and Neighbourhoods Scrutiny Committee is recommended to note and comment on the report.

Wards Affected - All

Environmental Impact Assessment -the impact of the issues addressed in this report on achieving the zero-carbon target for the city	The City Council is fully committed to its objective of being a Zero Carbon Council by 2038 at the latest. A significant component of the Council's current Climate Change Action Plan 2020-25 is for the Council to secure the supply of renewable energy. As set out in this report, the City Council is taking steps to directly purchase renewable energy through a Power Purchase Agreement which will make a significant reduction in CO2 emissions for the City Council in future 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 may 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

Not applicable at this stage – any revenue implications will be addressed via the Council's budget setting process for 2025/26 and beyond, with the financial performance of the PPA being reported as part of a future update to the Scrutiny Committee once the arrangement goes live from September 2025.

Financial Consequences – Capital

Not applicable

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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, June 2023: Large Scale Renewable Energy Generation:
[Large Scale Renewable Energy Generation - Power Purchase Agreement \(Part A\).pdf \(Manchester.gov.uk\)](#)

Executive Report, December 2023: [Large Scale Renewable Energy Generation PPA Purchase Part A.pdf](#)

1. Introduction

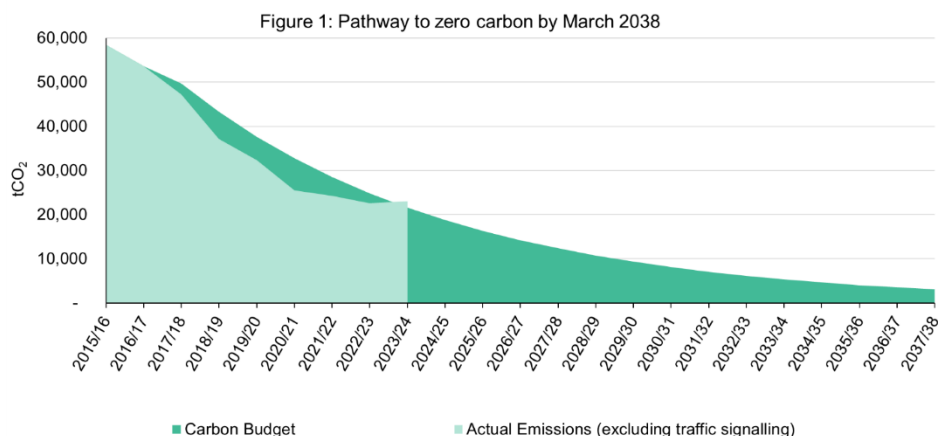
- 1.1 The Council has committed to be zero carbon by 2038 at the latest, based on science-based targets developed by the Tyndall Centre. The Council has in place a Climate Change Action Plan (CCAP) for the period 2020-25 and is currently developing a new CCAP for the next 5 years (2025-30).
- 1.2 A key action which the Council needs to implement within its current 2020-25 CCAP is putting in place long-term supply of renewable energy provision from a large scale renewable energy scheme, either through the acquisition and direct management of a solar farm or entering into a Power Purchase Agreement (PPA).
- 1.3 Following extensive due diligence in 2022/23 on options for a potential solar farm acquisition, it was found that this would not be a viable proposition for the Council to invest in and therefore MCC began to progress with the identification of an appropriate PPA. A 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 and 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 10 and 15 years.
- 1.4 This report sets out the latest position with the Manchester PPA, which was procured and a preferred developer presented to and approved by the Executive on 13th December 2023. The Environment, Climate Change and Neighbourhoods Scrutiny Committee received Part A and B reports on this process at the meeting held on 7th December 2023 and requested that a 12 month update on progress was presented to the Committee in December 2024.

2. Background

- 2.1 The Council declared a Climate Emergency in July 2019 with a commitment to be Zero Carbon by 2038 at the latest. To achieve its objective to be Zero Carbon by 2038 at the latest, the Council (MCC) has a target to reduce its direct carbon emissions in line with science-based targets set by the Tyndall Centre for Climate Research.
- 2.2 The Council developed a Climate Change Action Plan (CCAP) 2020-25, which was approved by the Council's Executive in March 2020 and is in the process of developing its next 5-year Climate Change Action Plan for the period 2025-30. These plans include clear actions to reduce the City Council's CO₂ emissions to ensure it meets its objective to be Zero Carbon by 2038 at the latest alongside a range of other actions to support the city as whole to also decarbonise.
- 2.3 The Council has made significant progress in reducing its own direct carbon emissions to date and has consistently remained below the allocated carbon

budget. Since first reporting its carbon emissions in 2009/10, the Council has reduced its CO2 emissions by 67%.

- 2.4 However, maintaining this progress is becoming more challenging and a key component of the Council's emissions reduction programme has been to secure a significant level of direct supply of renewable energy.
- 2.5 In June 2023, Council officers took advice from the Tyndall Centre for Climate Research 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). Advice taken from Tyndall was that Planning and action is needed now to ensure that the 2025-30 CO2 emissions limits are not exceeded and that 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.
- 2.6 By entering into a PPA, the Council's commitment to purchase power gives the developer certainty of a guaranteed offtaker which helps them to fund the development of a renewable energy asset providing additional renewable electricity supply to the grid and 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.
- 2.7 MCC [quarterly emissions reports](#) have consistently shown 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. This is largely due to the National Grid using more natural gas in the production of its electricity supply.
- 2.8 Over time, the National Grid should continue to decarbonise and there is a new Government target to decarbonise the National Grid by 2030 (previous Government target was 2035). Despite this national target, the City Council needs to accelerate its decarbonisation in order to remain within its science-based pathway to be zero carbon by 2038.
- 2.9 As can be seen from the graph below, recent MCC data shows that Council emissions have been increasing, in part due to increased carbon intensity of the National Grid and in part due to increased energy demand.



- 2.10 The Council has exceeded its allocated CO₂ emissions target for the year 2023/24 by 1494 tCO₂ (7%) making 2023/24 the first year within the current CCAP period where MCC has seen an annual increase in emissions. The City Council continues to implement the current CCAP for the period 2020-25 and our projections are that MCC will remain within our science-based CO₂ targets (our Carbon Budget) over the current 5-year CCAP from 2020-25. However, the recent increase in emissions highlights the continued importance of taking actions to reduce the Council's CO₂ emissions and the Power Purchase Agreement will make a significant reduction in CO₂ emissions for the City Council in future years.
- 2.11 It is estimated that the PPA will contribute around 20,000t CO₂ reduction over the 5-year period of the Council's next CCAP (2025-30), which will be a significant contribution, but this will need to be combined with other measures in order for the Council to stay within its carbon budget.
- 2.12 Council officers are developing a new CCAP for the period 2025-30 which will be focussed on keeping the City Council on track to achieve its Zero Carbon 2038 objectives and to remain within our science-based targets for the period 2025-30. The PPA will continue make an on-going contribution to the Councils 2038 objectives.

3. Manchester Power Purchase Agreement

- 3.1 In Spring 2023, the Council went out to the market to identify and secure a Power Purchase Agreement (PPA) for the majority of its electricity provision. This process was supported by Ernst & Young, who were appointed as the Council's technical and financial advisors, along with DLA Piper providing the legal support to the process.
- 3.2 Following detailed analysis, it was decided that a virtual PPA (VPPA) was the most appropriate contractual structure for the Council to pursue. A VPPA is a single contract between the generator and buyer. It is a contract-for-difference and is treated as a financial derivative, or fixed-for-floating swap. If floating wholesale market prices are higher than the fixed PPA price, then the generator pays the buyer and if the wholesale market prices are lower than the fixed PPA price, then the buyer pays the generator. Accounting treatment

is more complicated than a physical PPA but the contractual structure is much simpler than the physical PPA providing more flexibility around volumes.

- 3.3 It is to be noted that a virtual PPA involves a hedging transaction. Based on the structure and provisions included in the virtual PPA, it will be intra-vires for the Council to enter into a VPPA pursuant to Section 1 Localism Act 2011.
- 3.4 The Council, in exercise of its powers, needs to comply with its general duties in respect of the proper administration of financial affairs and the Council has engaged with Chartered Institute of Public Finance and Accountancy (CIPFA) to ensure compliance from a financial governance perspective. The intention behind the PPA project is to support the Council's zero carbon agenda, as well as to ensure the certainty of electricity supply and price stability for the duration of the agreement. This was clearly outlined to CIPFA, who were comfortable with the approach taken around the transaction.
- 3.5 As the Council is proceeding with a virtual PPA, containing a price fixation component, this will require a classification as a derivative in the revenue budget and the financial statements. This has been discussed with the Council's external auditors Forvis Mazars. The PPA would be considered and shown in the accounts as a financial instrument with fluctuating future value in relation to energy market price developments. Derivates are to be accounted for in accordance with IFRS9, an International Financial Reporting Standard (IFRS) that addresses accounting for financial instruments; classification and measurement of financial instruments, impairment of financial assets and hedge accounting, and as such would be subject to a fair value review every year which would be disclosed in the annual financial accounts.
- 3.6 Furthermore, the PPA is subject to European Market Infrastructure Regulation (EMIR) reporting, which is undertaken on the signing of the PPA and then on an annual basis. The Council has engaged with a specialist firm to undertake the activity on its behalf.
- 3.7 In order to secure the PPA, the Council followed a competitive with negotiation procurement process as this was assessed to be the most effective way to meet Council requirements. On completion of the Invitation to Tender, two parties progressed to the negotiation stage of the process before submission of best and final offers, which were reviewed and assessed by a multi-disciplinary panel involving commercial, financial, legal, policy and technical expertise, which was overseen by the Assistant Director: Integrated Commissioning and Procurement. Following review of the best and final offers and carrying forward scores from the ITT process, AGR Power were selected as the preferred bidder.

PPA Developer

- 3.8 AGR Power is a leading renewable energy and sustainable infrastructure developer. Since its inception in 2011, AGR has delivered over 55 solar, wind, energy storage and sustainable agriculture assets, deploying over £850m of capital and connecting over 1.1GW of renewable energy to the UK market. As

of 2024, AGR is 50% owned by Railpen, one of UK's largest pension funds with over £34bn of assets under its management.

PPA Scheme

- 3.9 The scheme where the Manchester PPA is being provided from is the Bicker Fen Solar Project: a Solar PV and Battery Energy Storage System (BESS) hybrid renewable energy scheme being developed at Bicker Fen in Lincolnshire. The project encompasses a solar installation across a 97.3-hectare site with maximum export capacity of 49.9MWs coupled with a 50MW BESS. Upon completion, the project is designed to generate clean renewable electricity equivalent to providing power for 18,000 households, while the adjacent 50MW BESS system will allow the energy generated to be stored and provide essential grid stability services. In addition, the project will contribute to the long-term reduction of greenhouse gas emissions, supporting UK's commitment to a sustainable future.
- 3.10 At present, construction is underway and proceeding to programme:
- The solar pile foundations and mounting structure have been installed across 90% of the site. Panel installation is expected to start in January 2025.
 - Cable works and electrical installation is ongoing and will continue into Q2 (April – June) 2025.
 - BESS works including the main switch room are also progressing to programme. The main civil works in the BESS compound are complete and ready for BESS delivery.
 - To date, 17 different contracting companies have worked on-site, totaling over 210 professionals who have collectively worked 2,748 days.
 - Key milestones for the project are energisation scheduled by 30th April 2025, with connection date of 30th May 2025. The Manchester PPA offtake will commence by 30th September 2025.
- 3.11 It is to be noted that the development has been designed to mitigate flood risks. The design has placed all 'sensitive' equipment in areas that have the lowest flood risk. AGR and its subcontractors have engaged experts in the field to determine best solutions and mitigations.

Social Value

- 3.12 As part of Bicker Fen's project development programme, AGR has taken the initiative to create a Social Value Impact Fund dedicated to education, environmental preservation and prosperity of the communities where AGR works. AGR's Social Value Programme is specifically designed to support and further the objectives of Manchester City Council as well as the local communities in Lincolnshire, where the scheme is being delivered, through an annual financial commitment as well as by providing on-site educational programmes / employment opportunities and sponsoring local sports clubs.
- 3.13 As part of the programme AGR is dedicating £30,000 (index-linked) per annum to social and environmental causes governed by AGR together with

We Love Manchester, who AGR are in active discussions with, to maximise the benefits and opportunities the programme will create. In addition, AGR's financial partners have agreed to make a contribution to the Social Value Impact Fund in form of interest margin decrease equal to a minimum of £8,000 per annum bringing the total annual contribution to Manchester of £38,000.

PPA Operations

- 3.14 Work is ongoing to ensure that once the PPA goes live it is integrated with the Council's existing electricity supply provided by Drax. The PPA will be providing c85% of the Council's forecast electricity requirements and there needs to be a seamless interaction between the two arrangements. With regards to the PPA, there is an understanding of anticipated output through the P50 schedule, which outlines the projected electricity supply on times and days throughout the year. The PPA supply will be balanced through electricity purchasing via the Drax contract. There is active dialogue between all parties with regards to this to ensure that the Council, AGR and Drax are all sharing relevant information well in advance of the PPA go live date to ensure that there is complete synergy between all of the arrangements. In addition, the Council is also considering approaches to purchasing the 'top up' electricity that is required to optimise the financial position for the Council by potentially buying a proportion of the remaining electricity required in advance.
- 3.15 The PPA will be monitored closely, given there are a number of contractual obligations regarding levels of expected electricity production. There are several contractual 'penalty' clauses if the Council receives, for example, less than forecast provision of energy. The contractual arrangements negotiated protect the Council's position as far as practically possible, with the Commercial Governance and Corporate Energy Team taking a lead for the ongoing performance monitoring and tracking of the PPA.
- 3.16 It is currently projected that the Council's need for electricity will further increase over the coming years due to the proposed decarbonisation interventions for the corporate estate. This is driven by the move to electrically powered solutions from those previously using natural gas. Therefore, the Council will have increased power demands that will likely need to be served through additional offtake volumes from a PPA arrangement. In order to ensure that projected electricity use is tracked closely, forecasts are now being prepared on a quarterly basis, rather than annual as previously, using a blend of actual and projected offtake figures. Moving forward, the projections will be further updated utilising information that has been generated through the development of the corporate estates zero carbon roadmap which is likely to have the biggest implications for the pattern of electricity use.
- 3.17 It is to be acknowledged that with increased electricity consumption will also come increased ongoing revenue costs, given electricity costs more than the gas that is currently / previously utilised. Once the next quarterly iteration of the usage forecast has been completed, it is intended that a future cost projection will be produced to provide an overview of what this could look like based on what the future electricity price curve forecast indicates. It is to be

noted that with regards to the PPA, this provides the Council with a number of positive financial benefits in the early years of the arrangement. In addition, energy budgets for the Council's assets are in the process of being moved under Commercial Governance and Corporate Energy to further enhance performance monitoring, through more robust tracking of energy consumption and energy costs in order to identify any assets where energy performance is not in line with expected outputs, so any factors causing a difference in anticipated offtake is investigated and addressed swiftly.

4. Recommendations

- 4.1 Environment Climate Change & Neighbourhoods Scrutiny Committee is recommended to note and comment on the report.