

Climate Emergency Advisory Committee



Report of Acting Deputy Chief Executive Transformation and Operations

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To: Climate Emergency Advisory Committee

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REPORT NO:

Power Purchase Agreements

Recommendation

That the Committee recommends to Cabinet that officers join discussions with other Oxfordshire councils and commercial partners to identify the feasibility of entering into a Power Purchase Agreement.

Purpose of Report

1. Following the council's participation in a workshop on 22 July 2020, this report introduces the idea of the Vale of White Horse District Council working collaboratively with other Oxfordshire councils on a Power Purchase Agreement (PPA). The report explains the concept of a PPA, describes some of the issues for consideration and sets out the possible next steps.

Strategic Objectives

2. Tackling the Climate Emergency is a priority theme in the proposed Corporate Plan 2020-2024. The opportunity to consider a PPA is important as part of a portfolio of initiatives to meet the council's target to reduce the council's own carbon emissions by 75 per cent by 2025 and become a carbon neutral council by 2030.

Why is the council interested in a PPA?

3. The council will achieve its climate goals by adopting a range of initiatives. Energy efficiency in council buildings and the installation of on-site renewables are also important but are unlikely on their own to allow us to meet our carbon targets.

4. The council intends to purchase REGO backed renewable electricity. The Renewable Energy Guarantees of Origin (REGO) scheme provides transparency to consumers about the proportion of electricity that suppliers source from renewable generation. However, we cannot use this electricity to offset our own carbon emissions. The National Grid already takes this renewable energy into account when calculating the grid emissions factor, so to use this renewable generation for our own offsetting would be double counting.
5. The Greenhouse Gas Reporting Protocol allows us to record that we are using renewable electricity in our properties **if** the council's contribution is essential to the development of a generation asset. This is known as 'Additionality'. A PPA connects a consumer directly with a generator and this direct relationship provides the guarantee required. If the council's intervention is necessary for the project to occur then additionality is verified, and we can record our electricity use as having zero carbon emissions.
6. If the council enters into a PPA agreement with a renewable energy generator in Oxfordshire this would have the additional benefit of stimulating local renewable generation capacity.

How does a PPA work?

7. A PPA is a contract for a defined volume of electricity, for a defined price and a defined period.
8. Unlike standard energy procurement where the council would have a relationship with an energy supplier, a PPA would also involve the councils having a direct arrangement with an energy generator. The council pays the generator for the energy provided. In turn, the generator provides the council with a Renewable Energy credit, certifying that the council is using electricity with zero carbon emissions.
9. The energy supplier is still involved and provides a 'sleeving' service in which the electricity generated by the generator is matched on a half hourly basis to the customer's (council's) electricity demand. Electricity demand that does not match the renewable supply is purchased as normal from the energy supplier. The energy supplier will charge a fee for these administration and 'balancing' roles.
10. A PPA is therefore a three-way legal agreement as shown overleaf:

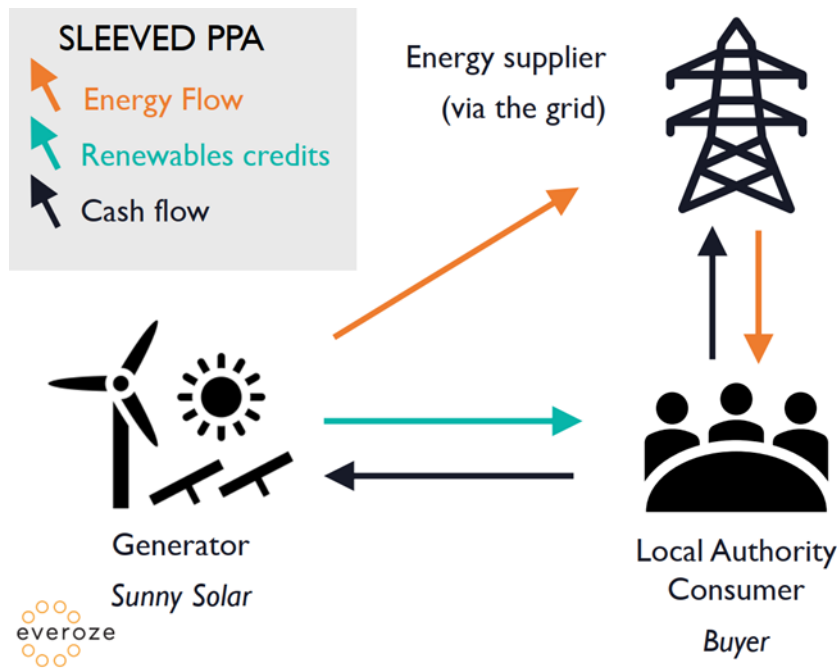


Figure 1. Interactions between parties in a PPA

Issues for consideration

11. A PPA would be a new way of operating for a council and there are some significant issues to consider:

FINANCIAL ISSUES

12. The council's current energy procurement contract is for a period of four years. Renewable energy investors require revenue certainty and, as such, a PPA is normally a long-term contract of around 15 years. Further work will be necessary to identify whether the project benefits justify such a long-term commitment.

13. No indicative costs are yet available for electricity purchased through a PPA and this would be part of further discussions. Electricity costs will be set by the generator at a level that will make an asset such as a solar farm viable.

PROCUREMENT ISSUES

14. Our current energy procurement contract with LASER allows for the incorporation of 'sleeving' and PPAs, but this is coming to an end and the energy supply is the subject of a new procurement. A future LASER contract could also accommodate sleeving and PPAs so our energy procurement will not be impacted by these proposals.

15. The PPA format is tried and tested in the private sector. Local government procurement rules are more complex, however PPAs have already been implemented by the following councils and there is scope for Oxfordshire councils to learn from existing documentation:

- West Sussex County Council
- Swindon Borough Council

- Warrington Borough Council
- City of London

16. The council would prefer where possible to support a renewable energy generator based in the local area. The Low Carbon Hub is already involved in plans to own and operate ground mount solar sites in Oxfordshire and is interested in working with local councils to deliver this.

PREDICTABILITY OF DEMAND

17. Entering into a PPA would require the council to estimate its long-term electricity demand. Modelling our long-term energy needs will be made more complex by the fact that we also intend to deliver other Climate Emergency projects that will reduce energy demand. We will also need to consider how our demand for electricity will increase as we move away from gas and adopt electric vehicles.

18. Further, the council's strategic property review may affect the number of assets we have remaining in the longer term to form part of a PPA.

SHAPE OF ENERGY DEMAND

19. One issue for PPA is that the pattern of generation and demand do not match over a 24-hour period. Offshore wind energy tends to be a better match than solar but would not be local. Any PPAs with Oxfordshire-based generators are likely to use solar energy. We may therefore require a portfolio of PPA agreements to meet our targets, which would add complexity.

Next steps

20. The opportunity exists for the council to enter into discussions with other Oxfordshire councils regarding a potential PPA consortium. The Chief Finance Officer from Oxford City Council will be raising the matter in the Oxfordshire Treasurers Group.

21. Further online meetings are planned with other Oxfordshire councils to discuss detailed procurement issues. The councils' Legal and Procurement officers will be invited to these meetings. Further details of how the four councils listed above have successfully implemented PPAs will be explored in these meetings.

22. If the council is interested in engaging with the Low Carbon Hub to enter into a contract with an Oxfordshire solar farm, the Low Carbon Hub's initial proposal has an aim to agree Heads of Terms with councils in February 2021. This proposed schedule has however not yet considered the timescales that could realistically be achievable by the councils.

Investment in solar energy

23. Investment in solar energy is also part of the Climate Emergency work programme and is being considered in a separate feasibility study. At present the council's electricity demand from offices, the Beacon, public conveniences and other properties is not sufficient to consider investment in a solar farm linked to a PPA. The council's leisure centres are currently not included within our energy procurement portfolio.

24. In 2019/20 approximately 70 per cent of the council's electricity demand was from leisure centres. Utilities at the leisure centres are currently procured by the leisure contractor. The council's leisure contract is due to end in 2024 with the option of a five-year extension. A new Active Communities Strategy is being commissioned which will consider options for the council in terms of leisure provision going forward. Our requirements for energy purchase arrangements can be considered as part of the development of this new strategy. When the electricity demand of our leisure centres is included, our demand may then be enough for the councils to consider securing electricity through a PPA with a local solar farm that could also be an investment opportunity.

Financial Implications

25. The success of this project depends on whether the electricity price that is needed by a generator to make renewable generation viable will be attractive to the council. Councils have good creditworthiness and are able to make long term plans and are therefore in a strong position to negotiate with other parties in the renewable energy market. Once further information is available, we will be in a position to review whether it is appropriate to sign up to a long-term contract.

Legal Implications

26. This potential project requires further investigation to identify whether a compliant procurement route is available which would allow the council to enter into a contract to support a local generation asset and/or enter into a PPA.

27. Due to the length of a PPA contract it is assumed that any procurement would need to be OJEU compliant.

Risks

28. A PPA would be a new procurement approach for the council. If the council decides to proceed further with investigating the options for PPAs after initial discussions then risks will be fully assessed within the project documentation.

Climate Emergency Implications

29. A Power Purchase Agreement is one way that the council can achieve zero carbon emissions from its own electricity use and therefore important for consideration within the Climate Emergency work programme.

Conclusion

30. A Power Purchase Agreement is a new energy procurement approach for councils that enables them to claim zero carbon emissions for the contracted electricity and thus contribute towards the council's Climate Emergency targets.