



Report to:	Climate and Environment Advisory Committee 21 June 2022
Lead Cabinet Member:	Lead Cabinet Member for Environmental Services and Licensing: also responsible for Waste, Climate and the Environment and Sustainable Travel
Lead Officer:	Head of Climate, Environment and Waste

Project Update: Waterbeach Renewable Energy Network (WREN)

Purpose of the Report

1. To provide an update on the Waterbeach Renewable Energy Network (WREN) as requested by the Climate and Environment Advisory Committee.

Key Decision

2. No

Recommendations

3. It is recommended that CEAC note the report. No decision is required.

Details

4. The Greater Cambridge Shared Waste Service (GCSWS) for Cambridge City Council and South Cambridgeshire District Council (SCDC) has made firm policy commitment to decarbonise the fleet of refuse collection vehicles by 2030. Both Cambridge City and SCDC have declared a Climate Emergency, and each has established targets and an Action Plan to reach zero carbon by 2050.
5. A key part of the decarbonisation programme is to replace the fleet of existing diesel RCVs (Refuse Collection Vehicles) as the current stock accounts for 1,800 tonnes of CO₂ per year. The first electric RCV has been in operation since November 2020 and the Councils' have ordered two further vehicles arriving in June and September 2022.
6. The Shared Waste Service operates from Waterbeach Depot off the A10, in between the Cambridge Research Park and Waterbeach Waste Management

Park. The local electricity network has insufficient capacity to meet the charging requirements of the Councils' fleet – the maximum grid supply will be reached once the two new eRCVS are operational by Q2 2022/23.

7. In order to continue the fleet decarbonisation programme to meet the Councils' 2028 and 2030 net zero targets, there is an urgent need for an on-site renewable energy solution to enable charging of electric RCVs. The project proposal will focus on servicing electricity demands of 35 electric RCVs to align with the first stages of the fleet decarbonisation and generation capacity from the solar pv array.
8. SCDC is leading the project team and is utilising the Cambridgeshire Local Authorities Energy Performance Services Contract, a Framework Agreement with Bouygues E&S Solutions Limited. An Investment Grade Proposal will be developed which verifies the feasibility of the project, refines the options for a renewable energy grid; qualifies and assesses major project risks; and develops a clear scope and approach for the development of the project.
9. The project team is working with the Cambridgeshire and Peterborough Combined Authority (CPCA) to ratify the funding of £2.7m towards the project which has an estimated value of £4.9m.
10. The renewable energy network will involve the following components:
 - a ground-mounted solar photovoltaic (PV) array 1MWp on adjacent land to the depot (with partial planning consent, final design will determine if amendments are required) ,
 - an Energy Storage System (ESS) 2MWh capacity to maximise the use of renewable energy from the solar PV array,
 - a Power Management system to control energy and optimise performance,
 - charging infrastructure,
 - and a point of connection to the electricity distribution network
11. The project proposal has been compared to an alternative option solely reinforcing the grid connection (without generating energy from renewable sources, using energy storage or integrating energy management). The initial assessment of the options shows that the project proposal out-performs in terms of financial benefit, carbon savings and renewable energy generation.
12. The next steps for the project team are to complete the business case and design; finalise the land lease with the landowner; and secure the grid connection. Following the completion of these tasks, officers will review the IGP to check it meets the key performance parameters and investment criteria and will then make recommendations to Cabinet in December 2022. Subject to approval, the build out would be programmed to start in early 2023.

Background Papers

No background papers

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