

**REPORT TO:** Executive Board

**DATE:** 17th February 2022

**REPORTING OFFICER:** Strategic Director Enterprise, Community and Resources.

**PORTFOLIO:** Climate Change

**SUBJECT:** Halton Smart Micro Grid

**WARDS:** All

## **1.0 PURPOSE OF THE REPORT**

To consider proposals for the development of a smart micro grid that that would seek to decarbonise the Council's building electricity, heating and transport via the culmination of several technologies.

**2.0 RECOMMENDATION: That the Executive Board approve a funding allocation of £250,000 to allow a technical consultant to be appointed to support the Project, including seeking a planning permission and to develop the required documentation to allow tenders to be invited for a Design, Build and Maintenance contract.**

## **3.0 SUPPORTING INFORMATION**

- 3.1 The Council completed construction of a 1MW Solar Farm, connected by private wire to the DCBL Stadium, on the former St Michael's Golf Course in September 2020.
- 3.2 Following completion of the project further feasibility work has been undertaken to see if there is scope to extend the Solar Farm and create a micro grid connecting in the Municipal Building, Lowerhouse Lane Depot and the new Leisure Centre in Moor Lane.
- 3.3 The project would Increasing the size of the Council's solar current PV generation portfolio by installing a combination of additional rooftop and solar farm solar PV generation schemes. This would aim to bring the total installed capacity to 5.1MW and would be achieved by extending the existing Solar Farm by 2.95MW and installing an additional 900kw of roof top solar.
- 3.4 The extension will be supported by a 2MW / 4MWh battery storage scheme in order to maximise the use of solar PV power overnight, support the use of heat pumps at the new Leisure Centre and provide an Electrical vehicle charging infrastructure at Lowerhouse Lane Depot to enable electrification of the fleet.

- 3.5 The project has previously been endorsed by the Executive Board in February 2021 (EXB 71 refers) and authority was given to proceed with a bid to the Liverpool City Region (LCR) Strategic Investment Fund (SIF). A bid was submitted in mid-2021 and discussions have continued over a number of months with the LCR and this had led to endorsement of the project by their Internal Investment Panel.

#### **4.0 LCR INTERNAL INVESTMENT PANEL OFFER**

- 4.1 The endorsement does not constitute a formal commitment to fund the project. That said Internal Investment Panel noted the unique and ambitious nature of the project, as well as its strong strategic fit with both the SIF's investment strategy and the LCR's wider low carbon ambitions.
- 4.2 A key condition of the Investment Panel's decision is that the Council provide an updated cost for the project to reflect current market prices. They would expect this to be supported by 2-3 fixed price proposals from Design and Build contractors. Once the fixed price proposals are received, an updated financial model will be produced.
- 4.3 The LCR will commission an independent industry proven technical expert to check the reasonability of the project's current assumptions, including revenue, lifecycle, operational, renewal and maintenance assumptions, as well as cashflow projections.

#### **5.0 BUSINESS CASE**

- 5.1 An outline budget estimate for the scheme was initially drawn up. This estimate has utilised current industry information about solar PV development and includes pre development costs for planning, Solar Construction and installation, a budget quote from Scottish Power in relation to the connection costs and budget costing in relation to the electricity infrastructure and private wire. The total cost to construct the project would be in the region of £10.611M (net of VAT).
- 5.2 The current offer from the LCR is to make a contribution in the region of £2.5m with the remaining funding provided by the Council. Since the outline budget estimate was completed, we are aware that there have been significant cost pressures on supplies, which has led to increased budget costs for many capital projects.
- 5.3 A projected cash flow illustration on the basis of a £2.5m contribution of £2.5m indicated that the Council would break even with the Council capital and interest for the funding borrowed repaid by the revenue stream from the electricity generated. After the debt has been paid the project will generate a surplus which will just help with the Council's revenue costs over the lifetime of the project. The projected surplus is £298K over 30 years on a £106K development costs investment.

5.4 The project will fund a number of capital investments and deliver long term revenue benefits to the Council as follows:

- The project caps electricity prices to the Council at 2.5% p. a. increase for the renewable component of supply for 30 years. If market energy prices rose by 4% annually over the lifetime of the project, the net revenue benefits to the Council are in the region of £2.5m.
- A £460K contribution to the Leisure Centre heat pumps.
- The £454K funding for electric charging infrastructure at the Lowerhouse Lane depot.
- De-carbonisation benefits. The connected buildings would use 67% of the energy generated amounting to 115,190,000kwh green electricity produced over 30 years. This equates to 26,839 tonnes of carbon dioxide savings over the lifetime of the projects.

## **6.0 NEXT STEPS**

6.1 To meet the condition set out by the LCR around fixed price proposals, this would require the Council to undertake a procurement exercise to appoint specialist consultants to support a planning application and the drafting of concept solar and engineering design work to support the development of a specification and subsequent tender process. The cost of this is estimated in the region of £250,000. The cost would be at risk if the project did not proceed.

## **7.0 POLICY IMPLICATIONS**

7.1 Nationally the Government has set a target for the UK to reduce its Carbon Emission in the period 2028-2032 to 57pc below 1990 levels. The Council also set its own reduction targets and these are currently being met. The Council has also recently declared a Climate Emergency, which calls for the Council to produce and use more renewable energy in its buildings. This scheme will help contribute to further reductions and support the Council's ambitions.

## **8.0 FINANCIAL IMPLICATIONS**

8.1 The project would require approximately £7.5m of funding by the Council as match funding to any successful SIF bid. The net benefits to the Council are set out in section 5.0 above.

## **9.0 IMPLICATIONS FOR THE COUNCIL'S PRIORITIES**

9.1 **Children and Young People in Halton**

None.

## 9.2 **Employment, Learning and Skills in Halton**

None.

## 9.3 **A Healthy Halton**

None.

## 9.4 **A Safer Halton**

None.

## 9.5 **Halton's Urban Renewal**

The Scheme will bring back into use a Council asset that has been unused for some years and is unsuitable for major development. It will contribute to the Council's targets to reduce carbon emissions and will demonstrate local leadership in promoting locally generated renewable energy, removing the reliance on traditional fossil based fuels.

The project will also act as a demonstrator project for the Liverpool City Region (LCR) and could provide a model to be replicated across the LCR on differing scales.

## 10.0 **RISK ANALYSIS**

- 10.1 A risk register for the scheme would be developed that puts in place control measures to mitigate against the main risks. The initial risk is the development costs should the project not proceed.

## 11.0 **EQUALITY AND DIVERSITY ISSUES**

None.

## 12.0 **LIST OF BACKGROUND PAPERS UNDER SECTION 100D OF THE LOCAL GOVERNMENT ACT 1972**

<b>Document</b>	<b>Place of Inspection</b>	<b>Contact Officer</b>
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"None under the meaning of the Act".