

REPORT TO: Corporate Policy & Performance Board

DATE: 3rd November 2020

REPORTING OFFICER: Strategic Director – Enterprise Community & Resources

PORTFOLIO: Environmental Services

SUBJECT: Energy / Carbon Reduction Update

WARDS: Borough Wide

1.0 PURPOSE OF THE REPORT

1.1 To provide an update on related activities aimed at reducing CO2 emissions within the Borough.

2.0 RECOMMENDATION: The report and the ongoing work be noted.

3.0 SUPPORTING INFORMATION

3.1 CARBON FOOTPRINT

3.1.1 Since the Council's participation in the Local Authority Carbon Management Programme, the Council has continued to implement a number of actions to reduce its carbon emissions and impact on the environment and at the same time deliver financial savings. Overall, the Council's CO2 emissions continue to reduce from a baseline in 2006/7 of 26,338 tonnes of CO2, to 11354 tonnes for 2019/20.

3.1.2 For 2019/20 the overall emissions have reduced by 3.2%.

Emission from specific Sectors	Co2 (Tonnes)
Fleet Transport	1,117
Business Mileage	349
Street Lighting	1,784
Corporate & School Buildings	8,104

There have been slight increases in emissions associated with both fleet transport and business mileage from the previous. Corporate buildings have also seen a

slight increase, this being solely down to increased gas usage. We have also taken on 2 new care homes, which have been included in the figures for the first time and general usage across the board seems to have risen slightly.

3.2 Street Lighting

3.2.1 Emissions from street lighting have been reduced by nearly 18%. This is attributed to the LED Lighting Switching Programme introduced by the Council some years ago. There has also been a reduction in emissions from schools of over 8%. This in part is down to 2 further schools converting to Academy status and as such have been taken out of the figures.

3.2.2 The Council is currently implementing a programme to switch high sodium pressure street lighting, used in residential areas and the main through routes in the borough, to LEDs. The programme started in 2015. The total cost of the programme was estimated at £4.6 m.

3.2.3 In total the Council has now changed approximately 15,300 street lights with a further 4,000 to be completed. Around 2000 street light LED upgrades were programmed for 2019/20 financial year, but the Covid restrictions delayed about 1200 units.

3.2.4 Typically, the carbon reduction is around a 60-70% saving on all street lights upgraded to LED.

3.3 Roof Top Solar and Biomass

3.3.1 The Solar PV on Council buildings has generated approximately 910,283 kilowatts of energy, which equates to 232tonnes of CO₂. The total income to date generated from Feed in Tariff payments is £343,825 with savings in energy bills approximately £8,008. The capital cost of the Solar PV was approximately £280,000 in 2012/13. The capital has now been repaid but the Council has an ongoing income stream to 2037.

3.3.2 The Biomass boilers at Brookvale Leisure Centre and Norton Priory have used approximately 5.7m kilowatts respectively. This equates to a CO₂ reduction of approximately 1000 tonnes. In addition, they have generated ££265,000 of income from the Renewable Heat Incentive Scheme. This is currently being used to repay the existing capital costs.

3.4 Solar Farm

3.4.1 The construction of a 1MW solar farm on the former St Michael's Golf Course was completed in August 2020. This will provide energy via a private wire to the Stadium. The capital cost of the scheme was approximately £1.2m of which 50% funding was provided by the European Development Fund.

3.4.2 The system will produce approximately 850,000kwh per annum over the next 25 -30 years. The energy generated by the Solar Farm will reduce CO2 emissions by 380 tonnes per annum.

3.4.3 The initial estimates were the energy used at the Stadium would offset costs by approximately £50,000 per annum at current prices. The surplus energy is sold under a Power Purchase Agreement and used to cover the operation and maintenance costs.

To date the system has produced approximately 230,000kwh in the first months of operation. We are currently using less energy from the Solar Farm at the Stadium and exporting more energy to the grid than predicted. This is due to the current Covid 19 restrictions, which has reduced normal activity at the Stadium and reduced energy demand.

The Council is currently exploring the feasibility of extending the farm and connecting it to the new Leisure Centre in Moor Lane.

3.5 Climate Action Plan

3.5.1 In December 2020, the Council declared a climate energy emergency. The work in this areas has been affected by Covid 19 and the need divert resources to address the pandemic. It is intended over the next 2/3 months to work with key Council Officers supported by APSE Energy to bring forward an action plan to cover the period 2021/22 to 2025/26.

3.6 Public Decarbonisation Fund

3.6.1 The Government has recently announced a Public Decarbonisation Fund of 1bn of grant funding, up to 100% of capital costs for energy efficiency and heat decarbonisation projects within public sector non-domestic buildings. Timescales for bids are tight and need to be submitted by either November 2020 or January 2021, with work completed by September 2021. Further work will be undertaken to assess the criteria with a view to submitting a bid in January 2021.

3.7 Borough Wide Projects

3.7.1 The Council is involved in a number of wider projects that aim to reduce the borough's carbon emissions. These include:-

Municipal Fleet Decarbonisation Plan: An Initially a feasibility study commencing in October 2020 will seek to identify various factors, such as capital and operational costs, technical requirements for utilising alternative powered vehicles for hydrogen hybrids, Battery Electric and FCEV. The project will examine the size and composition of the existing fleet and the normal renewal and replacement cycle of those existing vehicles. To understand perceived and actual barriers to early adoption and external funding that might be required. The study will report in around April/May 2021.

Low carbon Taxi: The project is an alternative fuels project to target some of the local taxi fleet (potentially 50 vehicles). This would assist in meeting the objectives of an emerging Liverpool City Region Climate emergency. With the EV market starting to become more affordable and range of batteries becoming more realistic for a commercial user, the timing is right to progress a project. A tiered approach could be adopted for example with Euro VI become the standard by 2025 for all newly registered vehicle as a standard.

T1 All newly registered petrol vehicles should be 100mg or less by 2025 and 75mg or less by 2030.

T2 This could be implemented at no cost to the council and if supported implemented in the next 12 months.

T3 Phase 2 would aim to secure funding to provide additional money to the worst offending vehicles (taxi) and RCV project above to encourage a transition to alternative powered vehicles.

‘3MG Going Green’: Stobart Energy installed a £100m Biomass at 3MG in Widnes, which has capacity to serve 45,000 new homes. Currently, Stobart have an agreement with Scottish Power to sell the surplus power to the grid. Stobart would like to be able to sell the electricity to 3MG businesses via a private wire and this will be explored in the coming years.

Astmoor Low Carbon Study Project: The project is a collaboration between the University of Chester, HBC, Halton, Chamber of Commerce and The Astmoor Industrial Estate Business Improvement District. The overall project will attempt to realise beneficial change in energy use on the estate. The project has 2 phases. The 1 phase will be research undertaken by post-graduate students from the University of Chester. It will be analytical in approach and have a strong commercial aspect.

PH1 The first phase will establish a baseline of energy usage that can be used to determine the carbon footprint of the entire estate. This work should result in an action plan being prepared that will offer the entire estate options, that if followed will achieve at least a 10 % reduction in the overall carbon footprint .

PH2 The second strand of this first phase will work with a small number of selected businesses on the estate. It will look in appropriate detail at current energy usage patterns and how their carbon profile can change. A specific action plan will be prepared for each business.

4.0 POLICY IMPLICATIONS

4.1 The approach and policies adopted to date are consistent with overall objective in the Corporate Plan.

5.0 OTHER IMPLICATIONS

5.1 Investment in energy efficient measures has the potential to reduce the Council’s energy costs, reduce carbon emission and generate future income streams or the Council.

6.0 IMPLICATIONS FOR THE COUNCIL'S PRIORITIES

6.1 Children and Young People in Halton:

None

6.2 Employment, Learning and Skills in Halton:

Encouraging investment in energy-efficiency will benefit from lower carbon emissions, job creation, supply chain development and increased competitiveness and security of energy supply.

6.3 A Healthy Halton:

Reducing CO2 can bring about improved air quality.

6.4 A Safer Halton:

None

6.5 Halton's Urban Renewal:

The transition to a low carbon economy can support the development of the local economy. Ensuring that future economic growth is decoupled from the consumption of fossil fuels and the inevitable carbon emissions.

7.0 RISK ANALYSIS

7.1 Individual schemes would have to be assessed on an individual basis to develop risk registers for each measure.

8.0 EQUALITY AND DIVERSITY ISSUES

None

9.0 LIST OF BACKGROUND PAPERS UNDER SECTION 100D OF THE LOCAL GOVERNMENT ACT 1972

None