

## **POLICY, GOVERNANCE & FINANCE COMMITTEE**

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**Date:** Monday, 27 March 2023  
**Title:** Burwell Heating System  
**Contact Officer:** Project Officer - Nicky Cayley

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### **Background**

The proposal to install a Micro Fuel Cell CHP boiler in the Burwell Hall as opposed to a standard modern gas boiler was considered at the Halls, Cemeteries and Allotments Committee held on 13 March 2023.

The Committee was concerned that the Micro Fuel Cell CHP boiler was too much of an unknown entity and had concerns surrounding suitability for the building and reliability. The Committee asked if the Council could obtain a discount on the product and become a case study in exchange for installing the boiler.

### **Current Situation**

The contractor that Officers have been in touch with about installing the Micro Fuel Cell CHP boiler also installs gas boilers and air source heat pumps. The Micro Fuel Cell CHP boiler was their recommendation given the size and energy demand of the hall, and the Council's declaration of a climate emergency and commitment to becoming carbon neutral in 2028. They made a site visit to the hall, so it was not a desktop exercise.

Due to the size of the hall, a domestic size micro-CHP boiler is suitable. Settings requiring larger boilers are hospitals, supermarkets etc.

Members may find the following videos useful to watch – they are interviews of customers who have the Viessman Vitovalor installed: -

<https://www.youtube.com/watch?v=rjQ6i4-Vw-I>

<https://www.youtube.com/watch?v=k-tAjMDb4Bc>

It will not be possible to obtain a discount on the Vitovalor as Vito Energy has already negotiated a £900 discount from the supplier, which is passed onto the customer.

It is not feasible for the Council to become a case study because the technology (although fairly new to the UK market) is reliable and very popular in Japan (see appendix 1 taken from BoilerGuide.co.uk) and the USA. Appendix 2 is an extract from the United States Environmental Protection Agency (EPA) which explains the benefits of CHP.

The Energy Saving Trust recommends this technology as a way to reduce carbon (see appendix 3).

The Project Officer has also included information on CHP (Combined Heat and Power) from Centrica to illustrate that multinationals are taking the technology seriously (appendix 4). Centrica describes CHP as *“recognised worldwide as a viable alternative to conventional generation, CHP is highly energy efficient and can deliver many positive financial, operational and environmental benefits.”*

The recommended Micro fuel Cell CHP boiler has the additional benefit of caretaking staff being able to control the heating with an app which can be used on the Corn Exchange’s tablet or on Council owned smart phones.

The Operations Officer and the Project Officer believe that the Viessman Vitocalor Micro Fuel CHP boiler is the best affordable option to replace the existing boiler at Burwell Hall if the Council wishes to reduce its carbon footprint.

### **Environmental impact**

Having declared a Climate Change Emergency at its Council meeting on 26 June 2019 – with this in mind Councillors should have due regard to the environmental impact of any decisions they make with regard to its facilities and services it operates. The Micro Fuel CHP boiler is a far better option environmentally than fitting a new gas boiler. The Council should also take up some of the other energy saving initiatives (such as insulation) recommended in the ESOx report.

### **Risk**

In decision making Councillors should give consideration to any risks to the Council and any action it can take to limit or negate its liability.

The Micro Fuel CHP boiler is newer technology but this report demonstrates that it is proven in other countries and should prove reliable for Burwell Hall.

### **Financial implications**

The cost of the unit and installation is £19, 000 (no VAT on this). The costs of a new gas boiler and water heater is £16, 993.56 excluding VAT. Both are under budget (£30, 000). Members should note that gas is cheaper than electricity so as the Vitocalor is using gas to produce electricity, there will be a financial benefit. The gas consumption will obviously increase – and this is estimated to be 6 – 8% more costly than if a new gas boiler is installed.

The information from the ESOx Feasibility Report commissioned last year suggests that the hall’s annual electricity usage is 10130kWh so the Vitocalor should cut the electricity usage from the grid significantly. Viessmann have a service plan which is around £150 per year, the cell will need a major service on year 5 which is around £600 and there is an optional overhaul on year 9/10 for about £1,000 which restores the output to "as new". They also have a callout built into the warranty which is free as long as the maintenance is kept up,

## **Recommendations**

Members are invited to note the report and consider the following:

1. Making a final decision on whether to install the Micro Fuel Cell CHP boiler (Viessman Vitocalor PT 2) in Burwell Hall to reduce carbon emissions or whether to install a modern gas boiler and water heater.