

Report to: Cabinet



Date of Meeting 12 July 2023

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## **Decarbonising our housing stock and providing affordable warmth for our tenants**

### **Report**

As reported to the Housing Review Board on the 16<sup>th</sup> March 2023 we have been working with local business Remit Zero who are based at Exeter Science Park, on a proposal to install their “cylo” product in ten council homes as a way of decarbonising council homes and providing tenants with affordable warmth. Cylo is a groundbreaking technology that provides zero emission affordable heating and hot water. Cylo has the potential to support the decarbonisation of most UK homes and is particularly well suited to homes occupied by those on lower incomes given its ability to store electrical energy as heat during low-cost periods from the grid and/or generated by local renewables such as solar PV.

In collaboration with Remit Zero an application has been made to Innovate UK for “Smart Grant” funding to partially fund this 12-month project running from the 15<sup>th</sup> August 2023. The project has been named “Project Phoenix”.

The total project costs are circa. £475,862 (excluding recoverable VAT). If this application is successful Innovate UK will cover £367,322. The remaining “match” being made up by EDDC and Remit Zero (in total £108,540 excluding recoverable VAT).

It is anticipated that the application will be determined by the 11<sup>th</sup> August 2023.

As previously reported to the Housing Review Board on the 16.03.2023 should the funding application prove unsuccessful, I would like to continue to progress this project regardless. Approval is therefore sought to issue an order to Remit Zero so that cylo manufacturing may commence, recognising an 8-to-10-week lead time for both manufacturing and material/component supplies to guarantee installation ahead of the autumn. The value of this order will be £285,056.76 plus recoverable VAT.

Cylo offers a serious alternative to gas boilers and ground/air source heat pumps, that does not necessitate extensive building fabric upgrades. Cylo is now a fully UKCA approved product underwritten by TUV so safety can be fully assured.

We have seen cylo installed in a facility at the Exeter Science Park and Remit Zero are in the process of installation the latest version of cylo within MOD properties following successful prototype testing last year. Whilst Remit Zero are a young company they have a very experienced Board of Directors with excellent governance procedures and oversight in place

It should be noted that the standard due diligence checks we would normally undertake in such circumstances are not possible in this instance as this is a pilot for a new and innovative technology being delivered in partnership with a relatively new micro business. However the Cylo system could offer significant opportunities for us in the future if the pilot is successful. There is always risk involved in being at the forefront of anything, but given Cylo’s impressive safety accreditations and the fact it is already in operation in some MOD homes, I believe this is an informed / calculated risk based on facts and scientific / engineering evidence

EDDC have invested Innovation and Resilience funding into the business during 2022.

I would propose funding the programme from our existing HRA budgets for heating upgrades.

**Is the proposed decision in accordance with:**

Budget Yes  No

Policy Framework Yes  No

**Recommendation:**

Taking note of the points in the report with regard due diligence Cabinet are recommend to approve:

- (1) Support for the Innovate UK funding bid and our role as a collaboration partner
- (2) Funding of the Council's contribution to the bid of up to £108,540 plus recoverable VAT as outlined in the above mentioned bid
- (3) Regardless of the outcome of the Innovate UK application, commit to funding the project, £475,862 (excluding recoverable VAT) from the HRA, initially authorising the issuing of an order to Remit Zero in the sum of £285,056.7 + VAT to enable the timely delivery of this project ahead of autumn 2023
- (4) To grant a waiver of Contract Standing Orders for the reasons outlined in the report.
- (5) To delegate authority to the Director of Housing to agree the terms of the contractual arrangements with Remit Zero in consultation with the S151 and Monitoring Officer

**Reason for recommendation:**

The project will advance our commitment to decarbonise the council's housing stock and provide tenants with affordable warmth.

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Portfolio(s) (check which apply):

- Climate Action and Emergency Response
- Coast, Country and Environment
- Council and Corporate Co-ordination
- Democracy, Transparency and Communications
- Economy and Assets
- Finance
- Strategic Planning
- Sustainable Homes and Communities
- Tourism, Sports, Leisure and Culture

**Equalities impact** Low Impact

**Climate change** High Impact

**Risk:** Medium Risk; This is new technology with inherent risks which is why we are proposing to pilot and test installations.

## Links to background information

Link to [Council Plan](#)

Priorities (check which apply)

- Better homes and communities for all
  - A greener East Devon
  - A resilient economy
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## Report in full

Remit Zero are using the principals of natural science to develop a portfolio of zero emission high performance products. The Company's first product, the cylo vessel, will change the way many families and businesses heat their homes and premises; a simple, innovative, affordable, and rapidly deployable heating solution which will help reduce CO2 emissions rapidly, while maintaining the user's comfort and convenience.

This project will conduct consumer trials of cylo. Relying solely on water and electricity, the cylo vessel can replace a fossil fuel boiler, without compromise, providing the same familiar functional performance, convenience, and low cost of operation but with absolutely zero emissions.

The cylo vessel is powered by electricity and is both a boiler and a source of hot water. The vessel stores thermal energy highly efficiently, harnessing electricity directly, either from renewables, such as solar PV, or from the grid ideally when it is in abundance and at its cheapest, utilising off-peak electricity tariffs including emerging dynamic Demand Side Response (DSR) based tariffs (economy 7).

Unlike other thermal batteries, cylo uses pressurised water as its working fluid, taking advantage of its high specific heat capacity and transfer qualities, effectively transporting heat through a co-current heat exchanger to provide emission-free heating and hot water.

Also worth noting is that from an ongoing maintenance perspective these units have an expected component lifecycle of 45 years, potentially offering a significant reduction in our liability in the long term

A waiver of contract standing orders is sought as this is a unique product without any market competition and the Council were part of a bid for resources that Remit Zero were leading, to secure external funds that would only be available to their scheme, if successful.

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## Financial implications:

The financial implications are considered within the body of the report.

## Legal implications:

-Contract Standing Orders require formal tenders to be obtained. For the reasons outlined in this report, a waiver of contract standing orders is sought to enable the appointment of Remit Zero.