# Adaptive heating technology for housing providers

# mixergy

### Designed for both Residents and Housing management

Mixergy's vision is to develop futureproof, cost effective and sustainable solutions to enable residents and housing management to take control of energy consumption, reduce bills, alleviate fuel poverty and reduce lifecycle costs.

Our technology unlocks opportunities for all our customers to have greater choice and flexibility in how they meet their hot water needs, regardless of their heating source, giving complete control over the management of hot water in the home.

# Lowering Residents fuel bills

Once installed, the Mixergy cylinder is simple to use and can be controlled in a variety of ways. Via the Mixergy app, with voice control via a smart speaker or via the gauge on the clyinder, enabling all residents to heat just the right amount of water for their needs. The cylinder has embedded machine learning tools that will analyse hot water usage within the property and will create automated heating schedules that can work alongside any smart tariff to reduce fuel bills for residents.

### Heating faster and saving money

As Mixergy cylinders are considerably quicker in heating water due to the unique top-down heating technology inside, it can heat up to 5 times quicker than a traditional hot water cylinder (connected to electric) or twice as quick when connected to a gas system boiler. This has a significant impact on the amount of energy used which can help alleviate those in fuel poverty.

On average, Mixergy customers see a reduction in hot water bills of up to 20%.

And we are proud that our cylinders have gained the Energy Saving Trust's verified product certification.





# Future proofed for low carbon transition

Managing the transition to net zero can be a challenge as it is critical to balance the needs of residents as well as meet the government climate targets.

Therefore, planning, designing and implementing the retrofit journey for the UKs social housing stock, is a complex programme of activity with a wide variety of solutions available to Housing Management to choose from.

# Works with multiple energy sources over working life

Designed as a future proof investment all cylinders are built to work with solar PV, solar thermal, heat pumps and hydrogen, as well as traditional heating sources. They are also compatible with a variety of control systems, so once installed they are ready to switch as other elements of the retro fit journey are implemented.

Mixergy is an intelligent choice as part of a range of solutions to improve the SAP rating within a property.

### Sizes

variety of UK housing stock.

Cylinder Size
90
120
150
180
210
250
300

(Litres)
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Cylinders are available in a range of sizes designed to meet the needs of the mixed

(Litres)	90	120		150		100		210		230	300
Diameter mm	478	478	580	478	580	478	580	478	580	580	580
Height mm	1141	1329	1050	1517	1236	1767	1418	2081	1608	1858	2125

### Space saving

Due to the unique top-up technology contained in the cylinder and faster heating times, smaller size cylinders can be installed freeing up important storage space in a property. Our slimline heat pump cylinder is ideal for retrofitting into existing properties.

#### Improve asset EPC scores

Mixergy is an intelligent choice as part of a range of solutions to improve the SAP rating within a property.

Cylinder Size (Litres)	90	120		150		180		210		250	300
ERP Rating Direct	В	В	В	В	В	В	В	В	В	В	В
ERP Rating Indirect	С	В	В	В	В	В	В	С	С	С	С
Standing loss* (kWh/24h)	0.54 - 1.32	0.54 - 1.08	0.54 - 1.15	0.54 - 1.15	0.54 - 1.15	0.54 - 1.27	0.54 - 1.27	0.54 - 1.37	0.54 - 1.37	0.54 -	0.54 - 1.75

\* the Mixergy cylinder has SAP Appendix Q benefits that can be factored in both SAP 2012 and SAP 10 not factored in the table above.



# Remote maintenance and monitoring

Social housing associations can access secure data and information to all of their fleet of Mixergy cylinders, via the Mixergy cloud dashboard.

This dashboard enables you to identify any possible maintenance issues, control the maximum hot water temperature and track and audit pasteurisation cycles within all properties.

The dashboard can also supply other useful insights which could help to identify early indications where vulnerable residents may need further support.

### Lower asset lifecycle costs

When installed, all cylinders are connected to the Mixergy cloud platform. Diagnostic, software fixes and system intelligence are delivered remotely, all of which contribute to the reduction of servicing and maintenance journeys and costs.

### case study Working with Ocean Housing

### **Project details**

As part of the BEIS funded 'PETE project', Ocean Housing offered their residents the chance to apply for a funded replacement Mixergy smart hot water cylinder. The primary aim of the project was to demonstrate a scalable domestic demand side response (DSR) offering. However, the project not only proved the mass-market viability of DSR, but also significant environmental and resident benefits.

### Context

According to the Energy Savings Trust, the average household cost to generate hot water each year is £125 per annum and direct electric customers are usually confined to simple 'economy 7' tariffs to lower bills.

What was the opportunity? Mixergy's smart hot water cylinders utilise machine learning algorithms to optimise heating schedules, only heating what is needed at the lowest possible cost. This allows users to minimize running costs, carbon and kWh's.

### **Project scope:**

#### 71 Mixergy Cylinders installed

- 65 x 90 litre direct cylinders.
- 6 x 180 litre direct cylinders.
- 1 x 180 litre Indirect cylinder.

### Results

A 35% reduction in running cost from £125 to £80 per year The average consumption per tank was 2.18kWh/day.

**16% reduction in carbon emissions** Equating to >50kg of CO2 saved per tank per annum of operation.

12% reduction in energy consumed by implementing ML When compared to a Mixergy cylinder running a normal 'customer set' timed schedule.

### **Carbon Insight**

The Mixergy cylinders were able to deliver hot water at a lower carbon intensity than a combi boiler: 183gCO2/kWh vs. 230gCO2/kWh.

![](_page_4_Figure_17.jpeg)

The implementation of machine learning shifted energy consumption into off peak so that twice the amount of energy was delivered at less than half the price.

12% less energy was consumed overall as the tank only heats what you need.

### case study East Devon Council

### Upgrading of E rated homes

**Project scope:** Working closely with East Devon Council Mixergy cylinders were installed in 100 properties as part of an upgrade project.

The project was focused on improving EPC 'E' rated home to EPC 'B' rated homes.

Mixergy heatpump ready and solar PV diverter embedded cylinders were connected to existing Solar PV on the rooftops of the properties and installed alongwith Vaillant AroTHERM monobloc airsource heat pumps.

Uprated Stelrad radiators where also fitted throughout as well as topping up roof insulation to a minimum of 8 inches.

### Results

The net effect of these measures led to an incredible uplift in the EPC performance of the Council's properties. Here are some worked examples:

- 1. A 3 bedroom semi-detached house was improved from an EPC E40 energy and F23 environmental impact to EPC B81 energy and B83 environmental impact.
- 2. A 1 bedroom bungalow was improved from EPC E46 energy and F29 environmental impact to EPC A93 energy and A94 environmental impact.

Now residents can operate their hot water and heating combined for a total peak cost of £0.65 per hour. This is significantly lower than their storage heater and immersion heater systems in place previously.

### Summary

Mixergy's range of space and energy saving cylinders ensure the most cost optimal way of delivering on carbon and cost savings, whilst maximising the operation life of your assets. To learn more, book a CPD or speak to the team, contact #TeamMixergy on enquiries@mixergy.co.uk

![](_page_6_Picture_0.jpeg)

For find out more on how Mixergy can help retrofit or new build journey call **01865 884 343** or email **enquiries@mixergy.co.uk** 

www.mixergy.co.uk

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Mixergy Ltd, 2 Canal View, Wharf Farm, Eynsham Road, Cassington, Oxfordshire OX29 4DB

T: 01865 884 343 | www.mixergy.co.uk

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