

EndoTherm[®]

Energy Saving Additive for Domestic Heating Systems



EndoTherm is a unique, multi-award-winning, energy saving additive for wet heating systems that is independently proven to save up to 15% on energy consumption and heating costs in addition to delivering significant carbon reduction.



Reduce energy consumption and heating costs by up to 15%.



Typical return on investment in under one year.



Substantial reduction in carbon emissions.



Single day CO₂ payback - low carbon footprint product.



100% Organic substance, ecologically-sound and sustainable.



Independent laboratory and third party tested and verified.



Compatible with leading boiler and inhibitor brands when dosed.



Non-corrosive, non-hazardous with no discharge requirements.



Easy installation with zero disturbance or system downtime.



Multi-award winning technology with industry recognition.

-  LES EURÉKA 2022 FOR A GREEN AND PROSPEROUS QUEBEC
-  NATIONAL ENERGY EFFICIENCY AWARDS 2020/21 BOILER & HEATING PROJECT
-  H&V NEWS AWARDS 2019 SMALL COMPANY ACHIEVEMENT OF THE YEAR
-  SHELL SPRINGBOARD 2018 LOW CARBON INNOVATION REGIONAL WINNER
-  ENERGY EFFICIENCY & HEALTHY HOMES REGIONAL AWARDS 2017 SMALL SCALE PROJECT OF THE YEAR
-  CIBSE BUILDING PERFORMANCE AWARDS 2016 - ENERGY SAVING PRODUCT OF THE YEAR
-  H&V NEWS AWARDS 2015 DOMESTIC H&V PRODUCT OF THE YEAR



Laboratory testing and studies carried out in samples of domestic and non-domestic properties, shows that EndoTherm has been effective in reducing energy and fuel consumption with condensing boilers



DOMESTIC IMPACT

EndoTherm is the ideal energy saving measure for the domestic market


Trivallis, a social housing provider in Wales, in conjunction with Atega Ltd, an independent energy consultancy, reviewed EndoTherm as part of their continuing efforts to reduce energy consumption and fuel poverty within its 10,000 plus households.

An estimated 155,000 households in Wales continue to live in fuel poverty (equivalent to 12% of all households) and Trivallis have been at the forefront of a number of energy efficiency and reduction projects.

Fanhuelog Sheltered Accommodation Scheme, a residential complex with numerous one and two bedroomed flats, was chosen for the study due to the similarity between each heating system. The study, which followed methodology set out and verified by the Energy Saving Trust, assessed the potential for energy, financial and carbon savings to the residents.

The analysis found that EndoTherm makes significant energy, financial and carbon savings as well as being a low cost and easy to install energy saving product. EndoTherm can be implemented in any wet heating system (whether powered by gas, oil, LPG, biomass or heat pumps).

INDEPENDENT DOMESTIC STUDY



Trivallis.

13.99
%

AVERAGE SAVINGS

DURATION


10 Months

PROPERTIES


6 Dosed, 2 control

AVERAGE CO2 SAVING

1,636 Kg



The Northern Ireland Sustainable Energy Programme (NISEP) provides funding to help install energy saving measures, including EndoTherm, into low-income households and those at risk of fuel poverty.



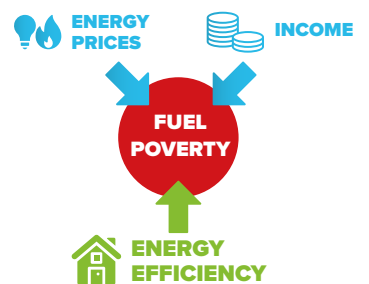
EndoTherm is offered as a free product incentive in Ireland with new boiler installations, boiler upgrades, as a bolt-on during services and maintenance and attracts a rebate and carbon credits.

TACKLING FUEL POVERTY

Fuel poverty is a devolved issue, with each nation in the UK having its own fuel poverty definition, targets and policies to tackle the issue. There are circa 27m households in the UK of which circa 21m households have a wet heating system.

There is a strong correlation between household income / energy requirements and efficiency / energy prices and the fuel poverty gap.

Using EndoTherm, the average UK household can typically save £153 p/a on their heating costs (based on a 15% energy saving). Therefore, installing EndoTherm could significantly reduce the fuel poverty gap and considerably help low-income fuel poor households.



	ENGLAND	SCOTLAND	WALES	N. IRELAND
Households in fuel poverty	3,260,000	613,000	196,000	179,000
Nation's % of all households	13.4%	24.6%	14%	24%
Average fuel poverty gap	£338	£700	£431	£436
% EndoTherm saving of fuel poverty gap	45.3%	21.9%	35.5%	35.1%

Data sources: UK and Welsh Government reporting on fuel poverty, BEIS – Annual Fuel Poverty Statistics Report 2023 (2022 data)

DOMESTIC SAVINGS EXAMPLE

EndoTherm is independently proven to save up to 15% on energy consumption and costs



Average UK household gas consumption per annum:
13,600 kWh



Average UK household gas costs per annum (July 23 Price Cap):
£1,020



Representative 15% energy saving per annum:
2,040 kWh



Calculated financial savings per annum:
£153



Energy savings measured in kWh converted to carbon emissions:
1 kWh = 0.216Kg CO₂e



Calculated reduction in carbon emissions per annum:
441Kg CO₂e

Data sources: UK Government reporting on energy usage and costs, BEIS, Ofgem, Enertek International, EPA Greenhouse gas equivalence calculations

DOMESTIC SAVINGS PROJECTED

EndoTherm is proven to last 10+ years in a heating system (assuming not drained or changed)

	GAS CONSUMPTION	FINANCIAL	CARBON EMISSIONS
Projected 3 year savings	6,120 kWh	£459	1,323 kg of CO ₂ e
Projected 5 year savings	10,200 kWh	£765	2,205 kg of CO ₂ e
Projected 7 year savings	14,280 kWh	£1,071	3,087 kg of CO ₂ e
Projected 10 year savings	20,400 kWh	£1,530	4,410 kg of CO ₂ e

CARBON REDUCTION EQUIVALENTS

A 10-year carbon emissions reduction of 4,410kg CO₂e per average UK household is equivalent to:

<p>GREENHOUSE GAS EMISSIONS FROM</p> <p>0.981</p> <p>Average petrol fuelled passenger vehicles driven for one year</p>	<p>GREENHOUSE GAS EMISSIONS FROM</p> <p>11,305</p> <p>Miles driven by an average petrol fuelled passenger vehicle</p>	<p>CARBON EMISSIONS FROM</p> <p>536,444</p> <p>Smart phones fully charged</p>	<p>CARBON SEQUESTERED FROM</p> <p>72.9</p> <p>Tree seedlings grown for 10 years</p>
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Embodied carbon is the measure of how many greenhouse gases (GHGs) are released throughout supply chain, manufacture and production. It can be used to determine the carbon footprint of products and materials.

The carbon footprint of EndoTherm is approximately **0.58kg CO₂e per 500ml bottle**. This low embodied carbon means that EndoTherm becomes carbon neutral in under one day of use



CARBON NEUTRAL



TESTIMONIALS

EndoTherm success from our customers in their own words



"I added a bottle of EndoTherm to my system in September and my bill for the last 3 months has already saved me over the half the cost than this time last year yet the heating has been on for the same amount. Well pleased with the saving."

**John - Humberside
Bungalow Owner**



"We have had a 6 column vertical radiator which just would never get warm at the top despite constant bleeding. After putting EndoTherm into the system this radiator is now always warm even to the very top yet nothing else has been changed. Just the easy solution we needed!"

**Roger - Sheffield
Semi Detached House Owner**



"I put EndoTherm in my open vent system about a month ago now, I'd say within 40 mins my system had reached temperature, the radiators felt significantly hotter, after a few days I was able to start turning my TRV's down and turn down my boiler in CH mode, my boiler is cycling less and the radiators are staying warmer longer. I would definitely recommend this product."

Marc - Heating Engineer



"The trials with EndoTherm in our boilers have been very impressive. We have noted less circulating noise and better conductivity. We will install EndoTherm into any central heating systems we install in the future."

Domestic Heating Engineer



"Energy Saving Trust recommended so can't really add anymore to a recommendation like that apart from should pay for itself within its first year and carry on saving, so should go some way to help pay for the yearly service!"

**Arien
Online Customer**



"EndoTherm was installed into one of our properties and within days the boiler had to be turned down to compensate for increased performance. Overall consumption had been reduced by 15.6%."

**Peter
Online Customer**



"I added EndoTherm to my system at home 3 weeks ago, I have a combi boiler with 9 radiators. I'd say it took much less than the 1 hour stated on the instructions to take effect throughout the system. The surface temperature of the radiators has increased significantly, and the convection from them is markedly improved; so the house heats up much quicker. I haven't had a gas bill yet with EndoTherm in the system so I can't give an indication of fuel saving, but I'd recommend it on improved system performance alone. Very pleased with the results."

Dave - Private Home Owner



"I have tried a few of this type of product and EndoTherm is only one that works when turn the boiler temp down radiators are still as hot."

**Peter B
Private Home Owner**



"I installed EndoTherm in our heating system in April 2013. We have been monitoring our monthly energy usage since moving in 2011 as we expected it to be higher than our previously smaller house. The 2 year old Vaillant boiler was very efficient but we were looking to reduce our heating bills. After adding EndoTherm into a bathroom radiator we were presented with an 11% reduction in our heating bills over a 12 month period after taking into account degree days."

Dave - Private Home Owner



"Rhondda Cynon Taf County Borough Council have tried a few test cases looking at EndoTherm. We added EndoTherm into a variety of domestic buildings with no other changes. We have discovered that radiators reported as hotter (from people unaware of what we have done) and a reduction in consumption between 12-21%."

**Energy Manager
Rhondda Cynon Taf County Borough Council**



EnerTek International are a privately owned independent R&D company who work on projects for multinational corporations, private companies, trade associations, and government departments.

Direct comparison tests with and without EndoTherm indicates that the gas consumption of the boiler in the heating system can be reduced by up to 15%. This empirical evidence indicates that the addition of EndoTherm can significantly reduce gas consumption and therefore CO₂ emissions.



The University of Chester is a public university that offers undergraduate, postgraduate courses as well as academic research. The University of Chester have recently completed a collaborative MRes based on EndoTherm.

From 2019, the collaboration with University of Chester has made significant progress in confirming the impact of the EndoTherm chemical properties. The partnership has also delivered design, build and implementation of modelling tools and performance verification hardware.

EndoTherm has been proven to make a considerable impact in domestic and residential applications including social housing, sheltered accommodation, care/residential homes and communal heating applications.

Trusted by Housing Associations, Councils, Local Authorities and private/social housing landlords in respect of their housing stock, including:

