



# UK and Ireland

## How oil condensing boilers have helped reduce heating costs and CO<sub>2</sub> emissions in UK and Ireland

### Why?

The EU has set itself an objective of achieving 20% energy savings by 2020 and 27% up to 2030; a substantial amount of these savings can be achieved by modernizing heating systems. Up to 38% of energy can be saved by modernizing an old and inefficient heating system. However, high efficient boiler technology will help a lot to reach these objectives.

### Outcome

OFTEC estimates that the average CO<sub>2</sub> emission from a three bedroom home in GB with a condensing boiler is 5.29 tonnes p.a. This is a 33 per cent reduction in the CO<sub>2</sub> emissions of a standard efficiency oil boiler which emits 7.95 tonnes of CO<sub>2</sub> p.a. Also the boiler efficiency is much higher in that it require 25 per cent less fuel to create the same amount of heat. For the average 3 bedroom home in the UK this means a saving of at least € 550 p.a.

This significant achievement was made because government, industry and the installers/trade co-operated together. A special fund was set up to ensure all installers received training on the new and more complex condensing boiler technology. Also enforcement of the new regulations was enhanced due to installers being required to notify all new boilers to the local government office through organisations such as Eurofuel member – OFTEC. These organisations had established registers of “competent persons” that are Government recognised, and this encourages the public to use only those people who are properly trained to install and maintain oil boilers.

### What?

Standard efficiency oil central heating boilers were installed in over a million UK homes in the early 2000's and in some 500,000 homes in the Republic of Ireland. These boilers have high emissions of CO<sub>2</sub> and other GHG and cost a lot to run compared to modern condensing boilers.

In 2005 the UK Government introduced changes to the Building Regulations in England and Wales. These now required all new gas and oil boilers to be high efficiency condensing models – in both new build and replacement situations. For oil boilers the introduction of the new laws was delayed until 2007 owing to the technical and manufacturing complexities of oil. Similar legislation was introduced in Scotland, and in Northern Ireland, and in the Republic of Ireland the industry itself has acted (see below).

This radical step has made an enormous contribution to the reduction in CO<sub>2</sub> emissions from domestic heating in England and Wales.

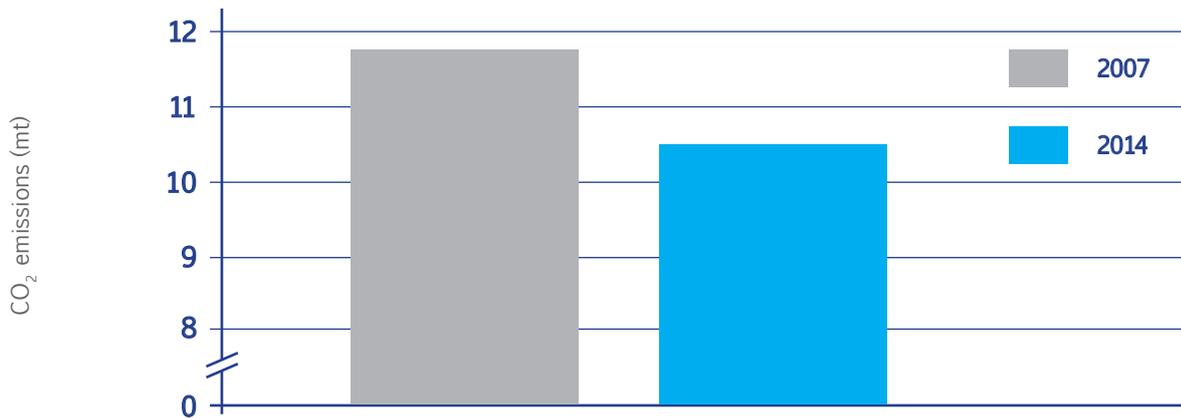
*„This is a 33 per cent reduction in the CO<sub>2</sub> emissions of a standard efficiency oil boiler which emits 7.95 tonnes of CO<sub>2</sub> p.a. Also the boiler efficiency is much higher in that it require 25 per cent less fuel to create the same amount of heat. For the average 3 bedroom home in the UK this means a saving of at least € 550 p.a.“*

### Contact

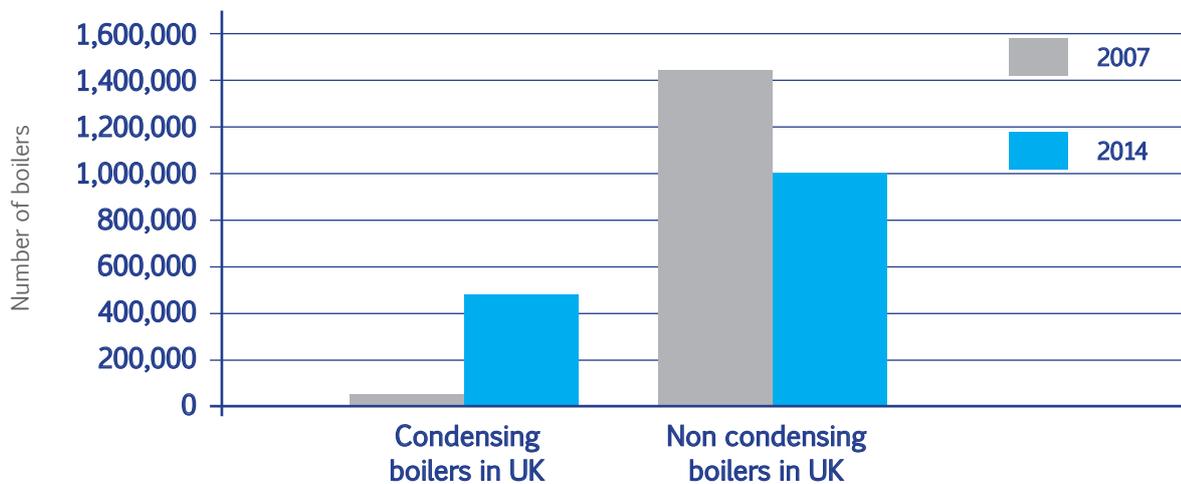
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CO<sub>2</sub> emissions from oil heating reduced by more than 10%



Amount of condensing boilers increase drastically



Savings after boiler modernization (average figures)	Before boiler modernization (non-condensing boiler)	After boiler modernization (condensing boiler)	Savings	Savings (%)
Kerosene consumption (litres p. a.)	2576,0	1718,0	858,0	33,3
Cost (£ p. a.)	1416,8	944,9	471,9	

## Ireland

Oil boiler manufacturers were frustrated that the authorities in Ireland (both Northern Ireland and the Republic) were unwilling to enforce legislation that required only condensing boilers to be installed. In order to ensure that the industry played its full part in reducing GHG emission, the companies themsel-

ves – with guidance from OFTEC – made a common agreement that from 1 January 2014 they would only manufacture and sell condensing oil boilers. In time this will make a significant contribution to CO<sub>2</sub> emission reductions in Ireland.