



# HIGH EFFICIENCY BOILERS

## Homeowner Information

**Homeowners can typically reduce their energy usage by up to 20% by installing a high efficiency boiler as a replacement for older lower efficiency models.**

There is now grant aid available through the SEAI Better Energy Homes scheme to help you improve your home using this measure.

Older conventional boilers can be wasteful of energy and costly to run because a significant portion of the heat is lost up the flue/chimney. The latest models of high efficiency boilers capture more of this heat, which would otherwise be lost.

### Case Study

John has a four bedroom detached house with a footprint of 150 m<sup>2</sup> and previously had an annual heating bill of €1,700. John's last boiler was installed in his home in 1995 and when it was purchased had an operating efficiency of 78%. The boiler was not serviced very often over the years and through general 'wear and tear' lost some of its operating efficiency. When John decided to replace the boiler, it is likely that it was operating well below 70% efficiency. A high efficiency condensing boiler rated at 92% efficiency was installed as the replacement boiler and over the past year has reduced John's heating bill by approx. 25% - an annual saving of over €400. John was also able to secure grant aid from the Better Energy Homes scheme to help him with the cost of this. Typical costs for this type of upgrade are approx. €2,000 - €3,000 (excluding grant).

### The Benefits of High Efficiency Boilers

- Reduction in heating bills
- Reduction in Greenhouse Gas emissions
- Increased comfort levels

### Do I Need a New High Efficiency Boiler?

You can do a quick check on your boiler requirements by answering the simple questions below. If you answer YES to all or the majority of these questions it would be beneficial for you to further investigate installing a new high efficiency boiler:

- Am I spending increasing amounts of money replacing parts on my current boiler?
- Does my boiler service engineer recommend that I change my boiler soon?
- Has my heating bill been increasing in recent years?
- Is my current boiler too big for my needs? (Are there less people in my house now, do I need less heat and hot water)

### Key High Efficiency Boiler Facts and Tips

#### Operating Efficiency

For the purposes of this scheme, high efficiency boilers are regarded as boilers with an efficiency of greater than 90%. This means that in excess of 90% of the fuel burned by the boiler will be converted to useful heat. The upper efficiency limit of most boilers installed prior to 2008 is approximately 78%, however it is likely that older boilers are running at significantly lower efficiencies than this.

#### Home-heating Appliance Register of Performance (HARP)

The HARP database is a product database for home-heating appliances that are used in Ireland. The database allows consumers to check the compliance of boilers against the Boiler Efficiency Directive and is also used as a resource in the boiler efficiency promotion campaign. Any boiler installed under the remit of the Better Energy Homes scheme must be approved on the SEAI HARP database or equivalent and have a seasonal efficiency of over 90%. The SEAI HARP database is available online at [www.seai.ie](http://www.seai.ie)

#### Boiler Sizing

If you decide to install a new boiler, please be sure to ask your supplier about the boiler size (i.e. kW rating). An oversized boiler can be very wasteful of energy. If you have recently upgraded your insulation or glazing for example, a like for like replacement may not be the most suitable solution for you.

## I Need a High Efficiency Boiler....What Do I Do next?

- a) Get more information on the Better Energy Homes scheme in one of three ways:
  - Download more information from [www.seai.ie/betterenergyhomes](http://www.seai.ie/betterenergyhomes)
  - Request more information by ringing 1850 927 000
  - Contact the scheme directly at [info@betterenergyhomes.ie](mailto:info@betterenergyhomes.ie)
- b) Contact a registered contractor for high efficiency boiler installation from the SEAI Registered Contractor list on [www.seai.ie/betterenergyhomes](http://www.seai.ie/betterenergyhomes)\*
- c) Once you have selected a suitable contractor, complete the Better Energy Homes Scheme application form.
- d) Consult the SEAI Better Energy Homes scheme Buyers Guide below and the SEAI Guide "Detailed Guide to Home Heating Systems" available at [www.seai.ie](http://www.seai.ie).

\*It is recommended you contact a number of registered contractors to ensure you receive the best quality available at a competitive price

## A Buyers Guide to High Efficiency Boilers

**Choosing and installing a high efficiency boiler should not prove to be a difficult process. However, there are important decisions to make and a few rules to apply to ensure that your boiler will be to your satisfaction and meet your requirements.**

It is vital to look for high quality when choosing your boiler. All registered boiler systems are listed on Sustainable Energy Ireland's Home-heating Appliance Register of Performance (HARP) database. You should consult this database prior to selecting a boiler system. The SEAI HARP database is available online at [www.seai.ie](http://www.seai.ie).

Please visit [www.seai.ie/betterenergyhomes](http://www.seai.ie/betterenergyhomes) for a list of registered contractors for this scheme. We recommend that you shop around and view other installed systems before making your final decision in order to get the best product and the best value for money. It is a good idea to discuss high efficiency boilers on offer with any friends, neighbours or workmates who may already have them installed, to give you a better insight of how they are operated, how often you might need to change settings and also the advantages, improvements and any problems people have experienced when they have had them installed

### Questions to ask your supplier and contractor

SEAI have compiled a list of questions you should ask your suppliers and contractors prior to making a purchase. It is in your best interest to make sure you are satisfied that all your questions are answered. If an answer seems too complicated then ask for a simpler explanation. If someone is selling you a new boiler they will be happy to provide an explanation to your satisfaction.

### Equipment

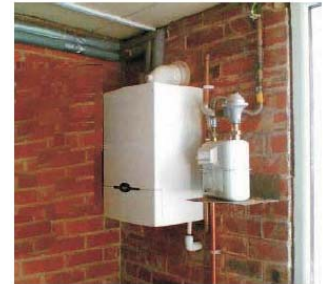
- Does my existing boiler need replacing? If so, why?
- Is the proposed boiler on SEAI's Home-heating Appliance Register of Performance HARP database?
- What is the seasonal net efficiency of the boiler?
- What Irish Standard (IS), British Standard (BS) or European Standard (EN) has the boiler been manufactured to?
- What control measures are included with the boiler? Will I need to purchase additional controls?
- Will the installation of the boiler affect the Building Energy Rating (BER) of my home?
- Will the boiler satisfy all rules and requirements for receipt of a grant under the Better Energy Homes scheme?

### Sizing and Design

- Is the boiler a condensing boiler? Has the contractor completed the Building Regulations condensing boiler installation assessment procedure for existing dwellings?
- Has the boiler been sized specifically to meet my requirements (over sizing the boiler can result in a loss in efficiency)?
- Is the boiler a modulating boiler? (Can it vary its heat output according demand without a significant loss in efficiency?)

### Installation and Commissioning

- Is the contractor on SEAI's list of Registered Contractors? (Remember, if the contractor is not listed you will not receive a grant under the Better Energy Homes scheme)?
- Does the contractor offer delivery, installation and commissioning?
- What training or accreditation has the contractor received?



- Which trade associations' does the contractor belong to?
- How many similar systems has the contractor installed? Are local references available?
- Will any of the installation be sub-contracted? How much?
- Who is ultimately responsible for what segments of work?
- What standards will the boiler be installed to?
- How long will the installation take?
- What are the procedures and tests carried out when commissioning the system?
- Will the boiler be located to allow sufficient clearance from combustible surfaces and materials?
- Is there a properly wired outlet for electricity near the proposed location?
- Is there enough fresh air supply to the boiler for safe and efficient combustion? If not, how can outside air be drawn in?
- Is there enough room around the boiler and its flue/chimney for maintenance access?
- Does the flue/chimney recommended take into consideration local factors such as windy conditions?
- Have the joints and seams of the flue pipes been properly sealed to avoid exhaust gas leakage in the boiler room?
- Who is responsible for repairing any disruption to walls/ceilings etc. necessary during the installation of the boiler?

### Operation and Maintenance

- Is full documentation, including any operation manuals and warranty provided in English?
- Will the supplier/contractor provide instruction and demonstration on how to operate the boiler?
- Will I need to carry out any housekeeping or maintenance tasks once the boiler is installed? If so, what are these tasks and how often will I need to carry them out?
- Does the supplier/contractor have spare parts available if required?
- What after sales service does the contractor provide? Will I be charged for subsequent call outs if required?
- How will the boiler interact with my new heating controls? Are there any particular methods or combination of settings that I should either avoid or use?

### Costs and Payment

- Does the quotation cover all costs associated with the works?
- What is the likely annual running costs for this type of boiler (fuel and maintenance)?
- What are the financing options or payment terms?
- At what stage will I get my SEAI grant payment?
- Are there any additional costs that I should be aware of?

### After-Sales Service

- What is the guarantee on labour and parts for the boiler?
- Is any professional maintenance (by the contractor or similar) required? Is an annual service contract available from the contractor?
- For how long does the contractor provide emergency service work if required?

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