

Energy Savings Sheet: Boilers

2EA have produced this sheet to identify areas of potential energy savings. It consists of notes and checkpoints that can be used by managers to help reduce overall energy consumption.

Notes

- Modern boilers are significantly more efficient than older designs. If your boiler plant is approaching 20 years old or more, you should seriously be thinking of replacing it. When replacing water-circulation boilers, condensing models should be considered. These are much more efficient in particular applications.
- Boilers lose energy via the flue gases, the boiler casing and, for steam boilers only, blowdown. The heat distribution system that a boiler serves can also be a significant source of inefficiency
- Optimum combustion of the boiler fuel is important for both efficiency and safety reasons. It is vital that all air vents are kept clear.

Checkpoints

Have you checked your plant for leaks?

- ✓ Check pipe-work, valves, flanges and the boiler itself.
- ✓ If feed and expansion tanks are often filling, then a significant leak is likely.

Has your boiler been serviced?

- ✓ Boilers should be professionally serviced at least once a year. This should include cleaning of burners, a check on combustion efficiency and adjustment of air/fuel ratio for optimum efficiency in accordance with the manufacturer's instructions.

Is your boiler adequately insulated?

- ✓ If fitting additional insulation, ensure that this does not interfere with the burner or air supply to the boiler.

Is your flue gas temperature constant?

- ✓ Record it over a few months. A rising temperature indicates boiler fouling

Is yours a multi-boiler installation?

- ✓ If so, ensure that boilers are not running at part load unnecessarily. Sequencing controls, if not already fitted, should be considered.

Are piping, valves, flanges and other fittings insulated?

- ✓ Heat loss from these areas reduces efficiency by a typical 10%, and insulating them is one of the most cost-effective measures that can be taken.



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