

SUMMARY OF EFFICIENCY TESTS OF ECOWARMTH RADIATORS

Test house details - Location Loughborough (Advantica Ltd)

- 2 bedroomed detached timber framed house with double glazed windows and average insulation. House is approx. 8 years old.
- Rooms sizes and sizes of Ecowarmth radiators installed

- Lounge/Diner	18.42 m ²	1.20 kW+ 0.80 kW
- Hall	2.97 m ²	1.00 kW
- Kitchen	4.92 m ²	
- WC	1.37 m ²	
- Bedroom 1	10.58 m ²	1.00 kW - "parent's room"
- Bedroom 2	10.81 m ²	1.00 kW - "children's room"
- Bathroom	4.72 m ²	
- Landing	2.70 m ²	0.50 kW
Total 56.49 m²		5.50 kW

Testing period and notes

- Testing period: 72 hours from 08:00 on Friday 07/11/08 – 08:00 on Monday 10/11/08
- Average inside temps for whole 72hours

Location	Setting	Average room temperature over 72 hours
Living Room	setting 4.5	21.0°C
Hallway	setting 4	19.0°C
Bedroom 1	setting 3	20.0°C
Bedroom 2	setting 4	21.5°C
Landing	setting 3	20.0°C
Kitchen	No radiator	18.5°C
Bathroom	No radiator	20.0°C

- Outside temps

Min front of house (South)	5.0°C
Min back of house (North)	3.5°C
Max front of house (South)	13.5°C
Max back of house (North)	13.5°C
- Front door faced North and there was no porch.
This is a Heat Loss Factor

- The oven was switched on for 1 hour each weekday day and TVs - in the Lounge/Diner and Bedroom 2 for 5 hours - to simulate normal family living conditions
- In bedroom 2 a window was deliberately left open for the whole test period so as to show how much more energy was required due to this Heat Loss Factor.** Final figures were then adjusted to show what average electricity usage would have been in bedroom 2 with the window closed.
- The test was run over a weekend and radiators were left on and not adjusted. Normally at night time and in bedrooms during the day the radiators would be turned down so as to provide approx. 15°C – 16°C constant temperatures. In such a case the kWh used would therefore be less than the results of this test - based on the same outside temperatures.
- Total kWh used over 72 hour period: 92.54 kWh
Ave per 24 hour period: 30.85 kWh
Total kWh used if bedroom 2 window closed: 78.26 kWh *
Ave per 24 hour period: **26.10 kWh ***

*(after adjustment to bedroom 2 figures because of open window)
- Total usage represented as number of minutes per hour actual electricity usage

5.5 kW x 24 hrs = 132 kWh max power output

 $\frac{26.10}{132} \times 100 = 19.77\% \times 60 \text{ mins} =$

11.86 mins per hour electricity usage to provide a full hour of heat
- The figures show average consumption and average winter temperatures and these can vary upwards or downwards depending on the lifestyle and habits of those living in the house as well as outside temperatures. If inhabitants are out at work and or school, then the radiators would be turned down in order to hold a temperature of about 15°C – 16°C until their return. This would result in lower kWh usage. This is also valid for night-times when radiators would be turned down.

*Notes

Test work was carried out by Advantica Certification Services which is a UKAS accredited laboratory under ISO17025:2005 (General *requirements for the competence of testing and certification laboratories*) & EN45011:1998 (General *requirements for bodies operating product certification systems*).

The measurements made were taken using test methods similar to those used in BS EN60335-1:2002 clause 10 (input power measurements) and Clause 11 (surface temperature measurements). However, the overall test method used on this occasion is not UKAS accredited.

Advantica Ltd changed its name to GL Industrial Services UK Ltd on 01.04.09

ecowarmth

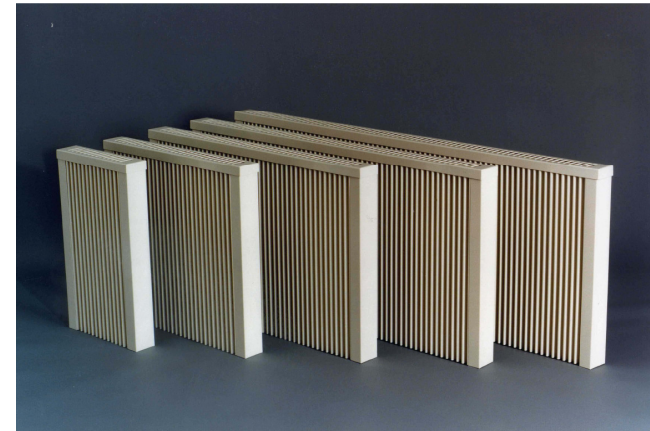
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Summary of independent efficiency and electricity usage tests carried out in Nov. 2008 by Advantica Ltd - a UKAS Accredited Independent Laboratory. *



Note

**A copy of the full report is available from Ecowarmth SW Ltd
Tel: 0800 027 3799 or via: enquiries@ecowarmth-sw.com**

*** see rear page**