

# Energy Performance Certificate

## Address of dwelling and other details

1/1,  
54 PROVOST ROAD,  
DUNDEE,  
DD3 8AH

Dwelling type: Mid-floor flat  
Name of approved organisation: Elmhurst Energy Systems Ltd  
Membership number: EES/006090  
Date of certificate: 28 October 2009  
Reference number: 2568-1904-3200-4011-7004  
Total floor area: 54 m<sup>2</sup>  
Main type of heating and fuel: Room heaters, electric

## This dwelling's performance ratings

This dwelling has been assessed using the RdSAP 2005 methodology. Its performance is rated in terms of the energy use per square metre of floor area, energy efficiency based on fuel costs and environmental impact based on carbon dioxide (CO<sub>2</sub>) emissions. CO<sub>2</sub> is a greenhouse gas that contributes to climate change.

| Energy Efficiency Rating                    |                                                                                                             |           | Environmental Impact (CO <sub>2</sub> ) Rating                  |                                                                                                               |           |
|---------------------------------------------|-------------------------------------------------------------------------------------------------------------|-----------|-----------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------|-----------|
|                                             | Current                                                                                                     | Potential |                                                                 | Current                                                                                                       | Potential |
| Very energy efficient - lower running costs |                                                                                                             |           | Very environmentally friendly - lower CO <sub>2</sub> emissions |                                                                                                               |           |
| (92 plus) <b>A</b>                          |                                                                                                             |           | (92 plus) <b>A</b>                                              |                                                                                                               |           |
| (81-91) <b>B</b>                            |                                                                                                             |           | (81-91) <b>B</b>                                                |                                                                                                               |           |
| (69-80) <b>C</b>                            |                                                                                                             |           | (69-80) <b>C</b>                                                |                                                                                                               |           |
| (55-68) <b>D</b>                            |                                                                                                             |           | (55-68) <b>D</b>                                                | 66                                                                                                            | 69        |
| (39-54) <b>E</b>                            | 50                                                                                                          | 55        | (39-54) <b>E</b>                                                |                                                                                                               |           |
| (21-38) <b>F</b>                            |                                                                                                             |           | (21-38) <b>F</b>                                                |                                                                                                               |           |
| (1-20) <b>G</b>                             |                                                                                                             |           | (1-20) <b>G</b>                                                 |                                                                                                               |           |
| Not energy efficient - higher running costs |                                                                                                             |           | Not environmentally friendly - higher CO <sub>2</sub> emissions |                                                                                                               |           |
| <b>Scotland</b>                             | EU Directive 2002/91/EC  |           | <b>Scotland</b>                                                 | EU Directive 2002/91/EC  |           |

The energy efficiency rating is a measure of the overall efficiency of a home. The higher the rating the more energy efficient the home is and the lower the fuel bills are likely to be.

Approximate current energy use per square metre of floor area: 305 kWh/m<sup>2</sup> per year

Approximate current CO<sub>2</sub> emissions: 46 kg/m<sup>2</sup> per year

The environmental impact rating is a measure of a home's impact on the environment in terms of carbon dioxide (CO<sub>2</sub>) emissions. The higher the rating the less impact it has on the environment.

## Cost effective improvements

Below is a list of lower cost measures that will raise the energy performance of the dwelling to the potential indicated in the tables above. Higher cost measures could also be considered and these are recommended in the attached energy report.

1 Increase hot water cylinder insulation

2 Low energy lighting for all fixed outlets

*A full energy report is appended to this certificate*



Information from this EPC may be given to Energy Saving Trust to provide advice to householders on financial help available to improve home energy efficiency.

For advice on how to take action and to find out about offers available to make your home more energy efficient, call 0800 512 012 or visit [www.energysavingtrust.org.uk](http://www.energysavingtrust.org.uk)

**N.B. THIS CERTIFICATE MUST BE AFFIXED TO THE DWELLING AND NOT BE REMOVED UNLESS IT IS REPLACED WITH AN UPDATED VERSION**

## Energy Report



The Energy Performance Certificate and Energy Report for this dwelling were produced following an energy assessment undertaken by a member of Elmhurst Energy Systems Ltd. This is an organisation which has been approved by the Scottish Ministers. The certificate has been produced under the Building (Scotland) Amendment Regulations 2006 and a copy of the certificate and this energy report have been lodged on a national register.

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Related party disclosure:

### Estimated energy use, carbon dioxide (CO<sub>2</sub>) emissions and fuel costs of this home

|                          | Current                         | Potential                       |
|--------------------------|---------------------------------|---------------------------------|
| Energy use               | 305 kWh/m <sup>2</sup> per year | 281 kWh/m <sup>2</sup> per year |
| Carbon dioxide emissions | 2.5 tonnes per year             | 2.3 tonnes per year             |
| Lighting                 | £55 per year                    | £27 per year                    |
| Heating                  | £314 per year                   | £340 per year                   |
| Hot water                | £287 per year                   | £238 per year                   |

Based on standardised assumptions about occupancy, heating patterns and geographical location, the above table provides an indication of how much it will cost to provide lighting, heating and hot water to this home. The fuel costs only take into account the cost of fuel and not any associated service, maintenance or safety inspection. This certificate has been provided for comparative purposes only and enables one home to be compared with another. Always check the date the certificate was issued, because fuel prices can increase over time and energy saving recommendations will evolve.

### About the building's performance ratings

The ratings on the certificate provide a measure of the building's overall energy efficiency and its environmental impact, calculated in accordance with a national methodology that takes into account factors such as insulation, heating and hot water systems, ventilation and fuels used.

Not all buildings are used in the same way, so energy ratings use 'standard occupancy' assumptions which may be different from the specific way you use your home.

Buildings that are more energy efficient use less energy, save money and help protect the environment. A building with a rating of 100 would cost almost nothing to heat and light and would cause almost no carbon emissions. The potential ratings in the certificate describe how close this building could get to 100 if all the cost effective recommended improvements were implemented.

### About the impact of buildings on the environment

One of the biggest contributors to global warming is carbon dioxide. The way we use energy in buildings causes emissions of carbon. The energy we use for heating, lighting and power in homes produces over a quarter of the UK's carbon dioxide emissions and other buildings produce a further one-sixth.

The average household causes about 6 tonnes of carbon dioxide every year. Adopting the recommendations in this report can reduce emissions and protect the environment. You could reduce emissions even more by switching to renewable energy sources. In addition there are many simple everyday measures that will save money, improve comfort and reduce the impact on the environment. Some examples are given at the end of this report.

### Summary of this home's energy performance related features

The following is an assessment of the key individual elements that have an impact on this home's performance rating. Each element is assessed against the following scale: Very poor / Poor / Average / Good / Very good.

| Elements                                               | Description                                  | Current performance |               |
|--------------------------------------------------------|----------------------------------------------|---------------------|---------------|
|                                                        |                                              | Energy Efficiency   | Environmental |
| Walls                                                  | Sandstone, as built, no insulation (assumed) | Poor                | Poor          |
| Roof                                                   | (another dwelling above)                     | -                   | -             |
| Floor                                                  | (other premises below)                       | -                   | -             |
| Windows                                                | Fully double glazed                          | Average             | Average       |
| Main heating                                           | Room heaters, electric                       | Very poor           | Poor          |
| Main heating controls                                  | No thermostatic control of room temperature  | Poor                | Poor          |
| Secondary heating                                      | Room heaters, electric                       | -                   | -             |
| Hot water                                              | Electric immersion, standard tariff          | Very poor           | Poor          |
| Lighting                                               | No low energy lighting                       | Very poor           | Very poor     |
| Current energy efficiency rating                       |                                              | E 50                |               |
| Current environmental impact (CO <sub>2</sub> ) rating |                                              | D 66                |               |

### Low and zero carbon energy sources

These are sources of energy (producing or providing electricity or hot water) which emit little or no carbon dioxide into the atmosphere. There are none applicable to this home.

### Recommended measures to improve this home's energy performance

The measures below are cost effective. The performance ratings after improvement listed below are cumulative, that is they assume the improvements have been installed in the order that they appear in the table. However you should check the conditions in any covenants, warranties or sale contracts, and whether any legal permissions are required such as a building warrant, planning consent or listed building restrictions.

| Lower cost measures (up to £500)                           | Typical savings per year | Performance ratings after improvement |                      |
|------------------------------------------------------------|--------------------------|---------------------------------------|----------------------|
|                                                            |                          | Energy efficiency                     | Environmental impact |
| 1 Increase hot water cylinder insulation                   | £36                      | E 53                                  | D 68                 |
| 2 Low energy lighting for all fixed outlets                | £15                      | D 55                                  | C 69                 |
| <b>Sub-total</b>                                           | <b>£51</b>               |                                       |                      |
| <b>Higher cost measures (over £500)</b>                    |                          |                                       |                      |
| 3 Fan assisted storage heaters and dual immersion cylinder | £269                     | C 77                                  | D 68                 |
| <b>Total</b>                                               | <b>£320</b>              |                                       |                      |
| Potential energy efficiency rating                         |                          | C 77                                  |                      |
| Potential environmental impact (CO <sub>2</sub> ) rating   |                          | D 68                                  |                      |

### Further measures to achieve even higher standards

The further measures listed below should be considered in addition to those already specified if aiming for the highest possible standards for this home. Some of these measures may be cost-effective when other building work is being carried out such as an alteration, extension or repair. Also they may become cost-effective in the future depending on changes in technology costs and fuel prices. However you should check the conditions in any covenants, warranties or sale contracts, and whether any legal permissions are required such as a building warrant, planning consent or listed building restrictions.

|                                                         |     |      |      |
|---------------------------------------------------------|-----|------|------|
| 4 50 mm internal or external wall insulation            | £41 | C 80 | C 72 |
| Enhanced energy efficiency rating                       |     | C 80 |      |
| Enhanced environmental impact (CO <sub>2</sub> ) rating |     | C 72 |      |

Improvements to the energy efficiency and environmental impact ratings will usually be in step with each other. However, they can sometimes diverge because reduced energy costs are not always accompanied by a reduction in carbon dioxide (CO<sub>2</sub>) emissions.

## About the cost effective measures to improve this home's performance ratings

If you are a tenant, before undertaking any work you should check the terms of your lease and obtain approval from your landlord if the lease either requires it, or makes no express provision for such work.

### Lower cost measures (typically up to £500 each)

These measures are relatively inexpensive to install and are worth tackling first. Some of them may be installed as DIY projects. DIY is not always straightforward, and sometimes there are health and safety risks, so take advice before carrying out DIY improvements.

#### 1 Hot water cylinder insulation

Increasing the thickness of existing insulation around the hot water cylinder will help to maintain the water at the required temperature; this will reduce the amount of energy used and lower fuel bills. An additional cylinder jacket or other suitable insulation layer can be used. The insulation should be fitted over any thermostat clamped to the cylinder. Hot water pipes from the hot water cylinder should also be insulated, using pre-formed pipe insulation of up to 50 mm thickness, or to suit the space available, for as far as they can be accessed to reduce losses in summer. All these materials can be purchased from DIY stores and installed by a competent DIY enthusiast.

#### 2 Low energy lighting

Replacement of traditional light bulbs with energy saving recommended ones will reduce lighting costs over the lifetime of the bulb, and they last up to 12 times longer than ordinary light bulbs. Also consider selecting low energy light fittings when redecorating; contact the Lighting Association for your nearest stockist of Domestic Energy Efficient Lighting Scheme fittings.

### Higher cost measures (typically over £500 each)

#### 3 Fan assisted storage heaters

Modern storage heaters are much less expensive to run than the direct acting, on-peak heating system in the property. A dual-rate electricity supply is required to provide the off-peak electricity that these heaters use; this is easily obtained by contacting the energy supplier. Ask for a quotation for fan-assisted heaters with automatic charge control. A dual-immersion cylinder, which can be installed at the same time, will provide cheaper hot water than the system currently installed. Installations should be in accordance with the national wiring standards. Building regulations may apply to this work, so it is best to obtain advice from your local authority building standards department and from a qualified electrical heating engineer. Ask the heating engineer to explain the options, which might also include switching to other forms of electric heating.

## About the further measures to achieve even higher standards

Further measures that could deliver even higher standards for this home. You should check the conditions in any covenants, planning conditions, warranties or sale contracts before undertaking any of these measures. If you are a tenant, before undertaking any work you should check the terms of your lease and obtain approval from your landlord if the lease either requires it, or makes no express provision for such work.

#### 4 Internal or external wall insulation

Solid wall insulation involves adding a layer of insulation to either the inside or the outside surface of the external walls, which reduces heat loss and lowers fuel bills. As it is more expensive than cavity wall insulation it is only recommended for walls without a cavity, or where for technical reasons a cavity cannot be filled. Internal insulation, known as dry-lining, is where a layer of insulation is fixed to the inside surface of external walls; this type of insulation is best applied when rooms require redecorating and can be installed by a competent DIY enthusiast. External solid wall insulation is the application of an insulant and a weather-protective finish to the outside of the wall. This may improve the look of the home, particularly where existing brickwork or rendering is poor, and will provide long-lasting weather protection. Further information can be obtained from the National Insulation Association ([www.nationalinsulationassociation.org.uk](http://www.nationalinsulationassociation.org.uk)). It should be noted that planning permission might be required and that building standards may apply to this work.

## What can I do today?

Actions that will save money and reduce the impact of your home on the environment include:

- Ensure that you understand the dwelling and how its energy systems are intended to work so as to obtain the maximum benefit in terms of reducing energy use and CO<sub>2</sub> emissions.
- If you have a conservatory or sunroom, avoid heating it in order to use it in cold weather and close doors between the conservatory and dwelling.
- Check that your heating system thermostat is not set too high (in a home, 21°C in the living room is suggested) and use the timer to ensure you only heat the building when necessary.
- Make sure your hot water is not too hot - a cylinder thermostat need not normally be higher than 60°C.
- Turn off lights when not needed and do not leave appliances on standby. Remember not to leave chargers (e.g. for mobile phones) turned on when you are not using them.
- If you're not filling up the washing machine, tumble dryer or dishwasher, use the half-load or economy programme. Minimise the use of tumble dryers and dry clothes outdoors where possible.
- Close your curtains at night to reduce heat escaping through the windows.