

Renewable energy case studies

Case study 3

Automated wood pellet stoves

Summary

Alexander Ellis and his partner live in a semi-detached three bedroom house in Stirlingshire. Until they installed an automated wood pellet stove they had been relying on an off peak electrical heating system, which was inefficient, expensive and unreliable.

Before they installed their wood burning stove they were paying up to £300 a year for space heating alone, but could not guarantee that the house would be warm when they needed it to be. They wanted a more controllable and reliable heating source so looked into the possibility of installing a wood burning system. Through their investigations they found out about wood pellet stoves and the Energy Saving Trust grants.

Mr Ellis was determined not to have another cold winter with his old heating system so he applied for an Energy Saving Trust grant and ensured the system was installed before Christmas. The stove and the flue were efficiently installed in one day so the couple did not experience any real disruption during the process. By leaving doors open on the ground floor the stove easily heats all the rooms. It requires very little maintenance; simply pressing a switch lights the fire and they only need to top it up with pellets once a week. Cleaning is minimal and easy and the ash box only needs to be emptied after every few months.

Mr Ellis' village does not have access to mains gas so residents have to rely on electricity, oil or Liquid Petroleum Gas (LPG) to heat their homes which can become very expensive during winter months. Renewable energy systems such as Mr Ellis' wood burning stove are an excellent heating alternative in areas such as these. Mr Ellis finds that the stove is much more controllable and efficient than his old heating system and hopes to see a reduction in household heating bills. The couple are also proud of the environmental benefits of the system and the fact that the pellets are made from wood that would otherwise be wasted.



Mr Ellis' automated pellet burning stove and his supply of pellets

Key points

- Heat output: 8.8kW
 - Cost of wood fuel: £125 per half tonne of pellets*
 - Distance from fuel supplier: 28 miles
 - Fuel being replaced: off peak electricity
 - Estimated fuel savings: between £100 and £160/yr
 - Estimated carbon savings: approximately 8,000kg CO₂/yr
- * It should be noted that the prices of wood fuel are always dependent on the distance from the supplier.

Cost

Total installation cost: £3,596.16

Grant amount: £1,078.85

Further information

In Scotland, the Energy Saving Trust (with funding from the Scottish Executive) offers homeowners grants of 30 per cent towards the cost of a renewable energy installation, up to a maximum of £4,000. Technologies eligible for funding include, but are not limited to, solar water and space heating, wind, hydro, heat pumps and automated wood fuelled boilers and stoves.

To obtain an application pack and further information contact the helpline on **0800 138 8858** or visit www.est.org.uk/schri.