CEEAC

Cumbria Energy Efficiency Advice Centre

Presentation by

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Using Less Heat

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Effects of Climate Change

- **Not just about warmer days!**
- **More extremely hot weather …**subsidence, risks to health, uncomfortable working conditions.
- **Lower summer rainfall…** water shortages, landscape fires, impacts on wildlife.
- **More ‘driving’ rain in the winter…** floods, damage to property, higher insurance premiums.
- **More windy, erratic weather…** disruption to travel, energy supplies, repair costs.

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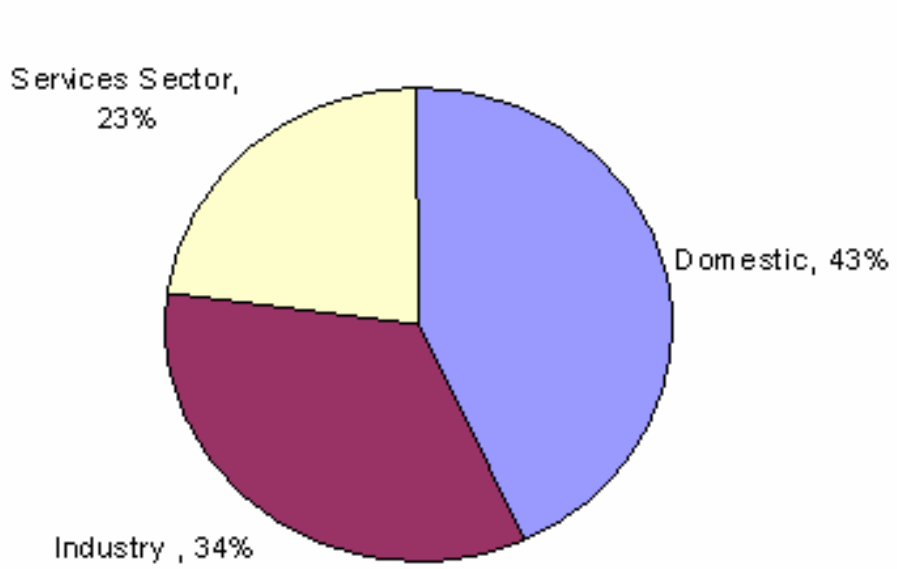
Energy demands in the built environment sector

The energy consumed by the UK building stock accounts for over 70% of the UK total primary energy consumption.

- **Domestic sector 43%**
- **Industry 34%**
- **Services sector 23%**



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Energy demands in the built environment sector

- The most immediate means of improving energy efficiency in buildings is:
  - Improve the quality of the building fabric.
  - New efficient domestic appliances
  - Building technologies
  - Legislation and improved building regulations
  - Adoption of small-scale renewable technologies.

- In the long term greater public awareness of the importance of energy efficiency is required.
- Buildings are responsible for 45% of carbon emissions in the UK.
- A typical UK dwelling's annual carbon footprint is around 9 tonnes CO2.
- Upgrading to 'best practice' insulation levels and using currently available efficient systems, lights and appliances, the footprint could, in theory, be reduced to 1.7 tonnes.

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Energy Efficiency is the Key

- Low cost / No Cost
  - **Turning thermostat down by 10C could cut the heating bills by up to 10% and save around £30 per year.**
  - **Switch all electrical appliances off at the on/off button.**

  During standby the appliances still uses up to 25% of full power.
  - **Never overfill a kettle, use any heating element appliance effectively**
  - **Low Energy Light Bulbs (CFLs) use about a 1/4 of the electricity that a normal bulb uses, lasts about 8 times as long and will save about £10 to £12 per annum.**
- Insulation
  - **35% – cavity wall insulation**
  - **25% – loft insulation**
- Heating
  - **Age of the system**
  - **Controls**

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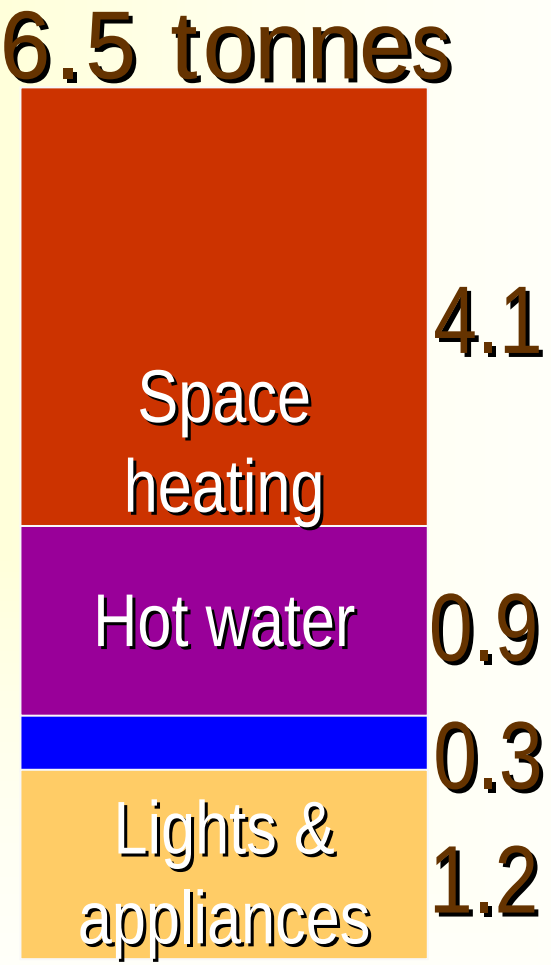
Typical 3 bed semi



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Typical 3 bed semi – advanced package

Cavity insulation + 100 mm external insulation or 150mm external

300 mm loft insulation

200 mm floor insulation

Double glazed super low E argon

Insulated doors

5 ach/h @ 50 Pa

Heat recovery ventilation

Condensing boiler

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