

# Energy/Sustainability Capital Fund

**Good afternoon**

Chris Holme, Principal Engineer  
Estates & Facilities Division

# Energy Efficiency Sustainability Fund



- **Yes, I'm the Man managing the £100 million capital money.**
- **It is available to any Trust in the NHS**
- **If it provides reasonable Carbon reduction and is financially viable DH will try and support it.**
  
- **But more of that later !!**



# Key topics

- **Climate Change**
- **The cost of Energy**
- **DH and National Gov't targets**
- **Fuel shortages**
- **Carbon saving initiatives**
- **Environmental concerns**
- **Investment**



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# Target



*As defined by Minister for Health John Denham in 2001*

**Reduce primary Energy use by 15% or 0.15 million tonnes of carbon from a base year of 1999/00 to March 2010**

**For new capital developments meet an energy target of 35-55 GJ/100cu m**

**For existing facilities achieve 55-65 GJ/100 cu m**

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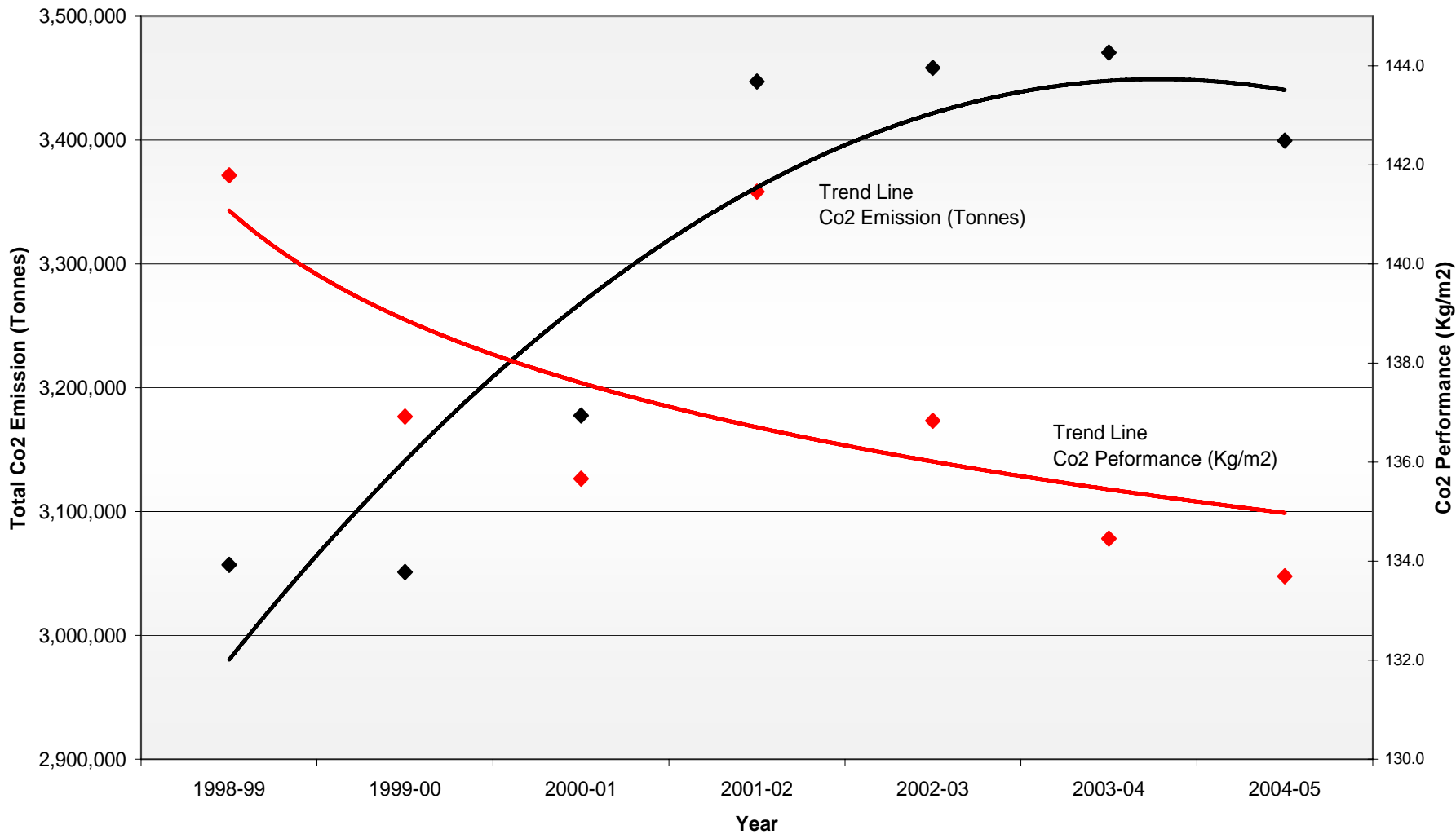


Energy

**Energy Performance**

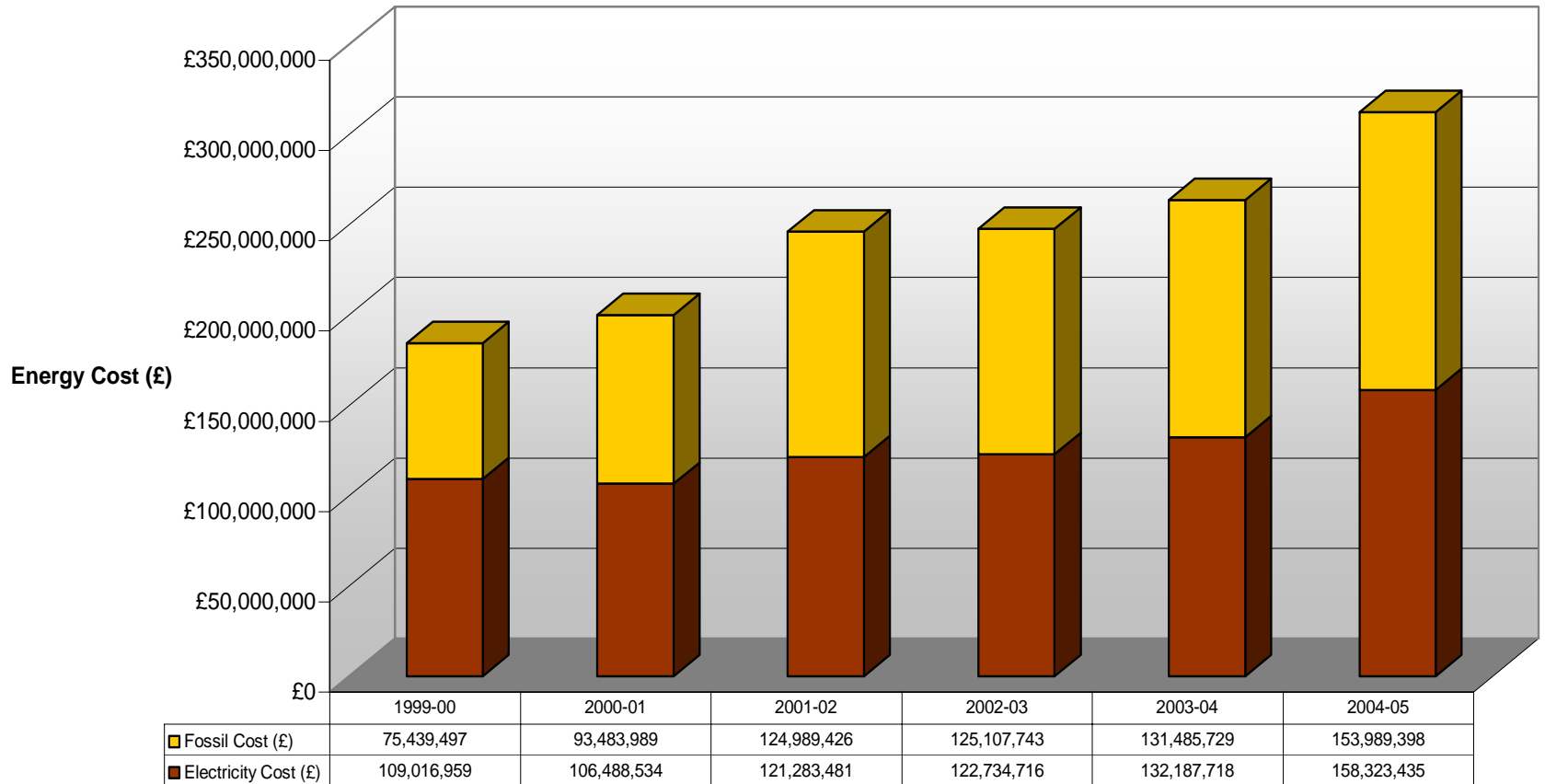
**The Half Way Analysis**

# Trend of Co2 Total Emission (Tonnes) Compared to Change in Co2 Performance (Kg NHS England 1999/00 - 2004/05



# Trend of costs

## Trend of Total Energy Cost - NHS England

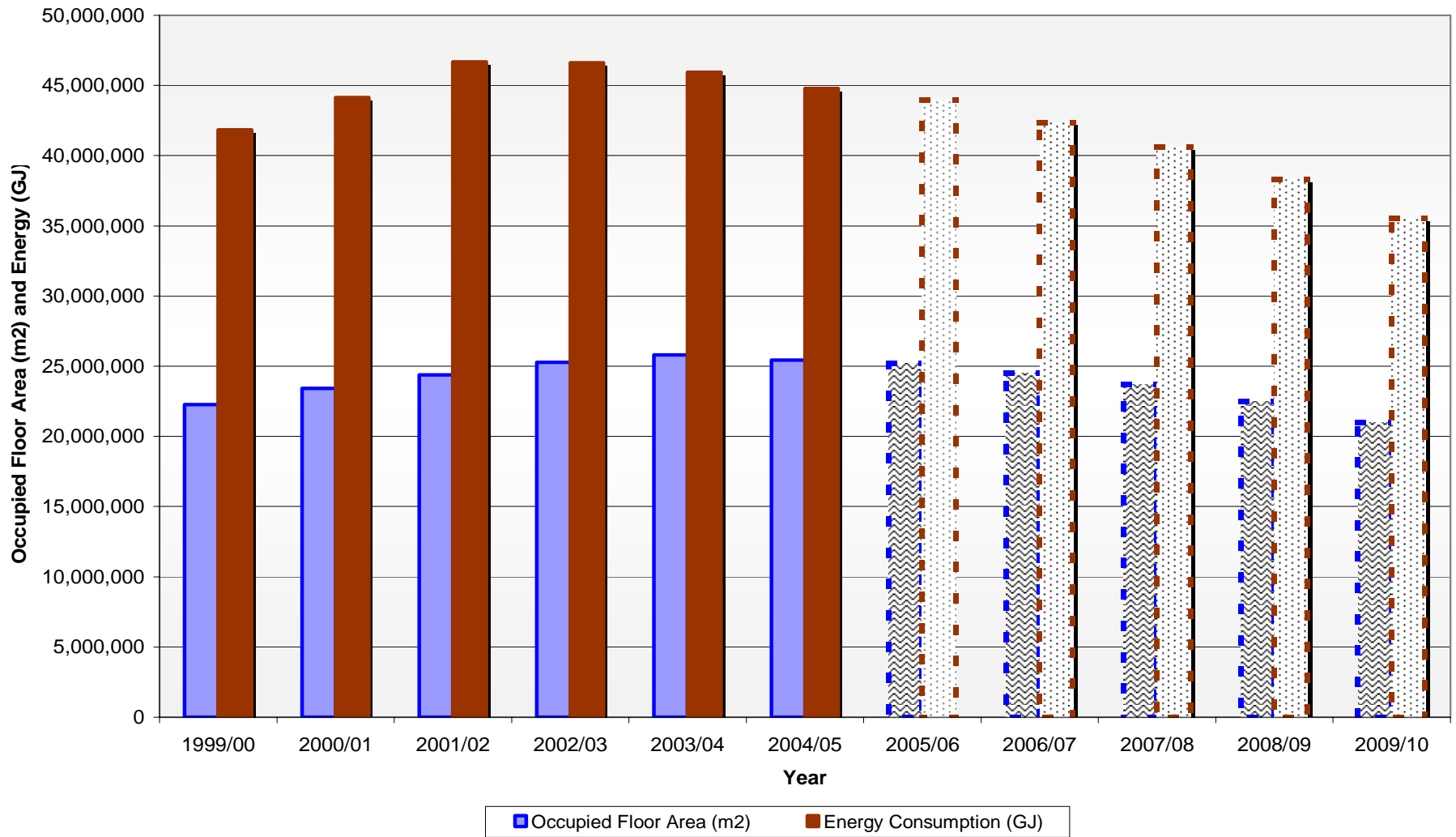


Year

Electricity Cost (£) Fossil Cost (£)

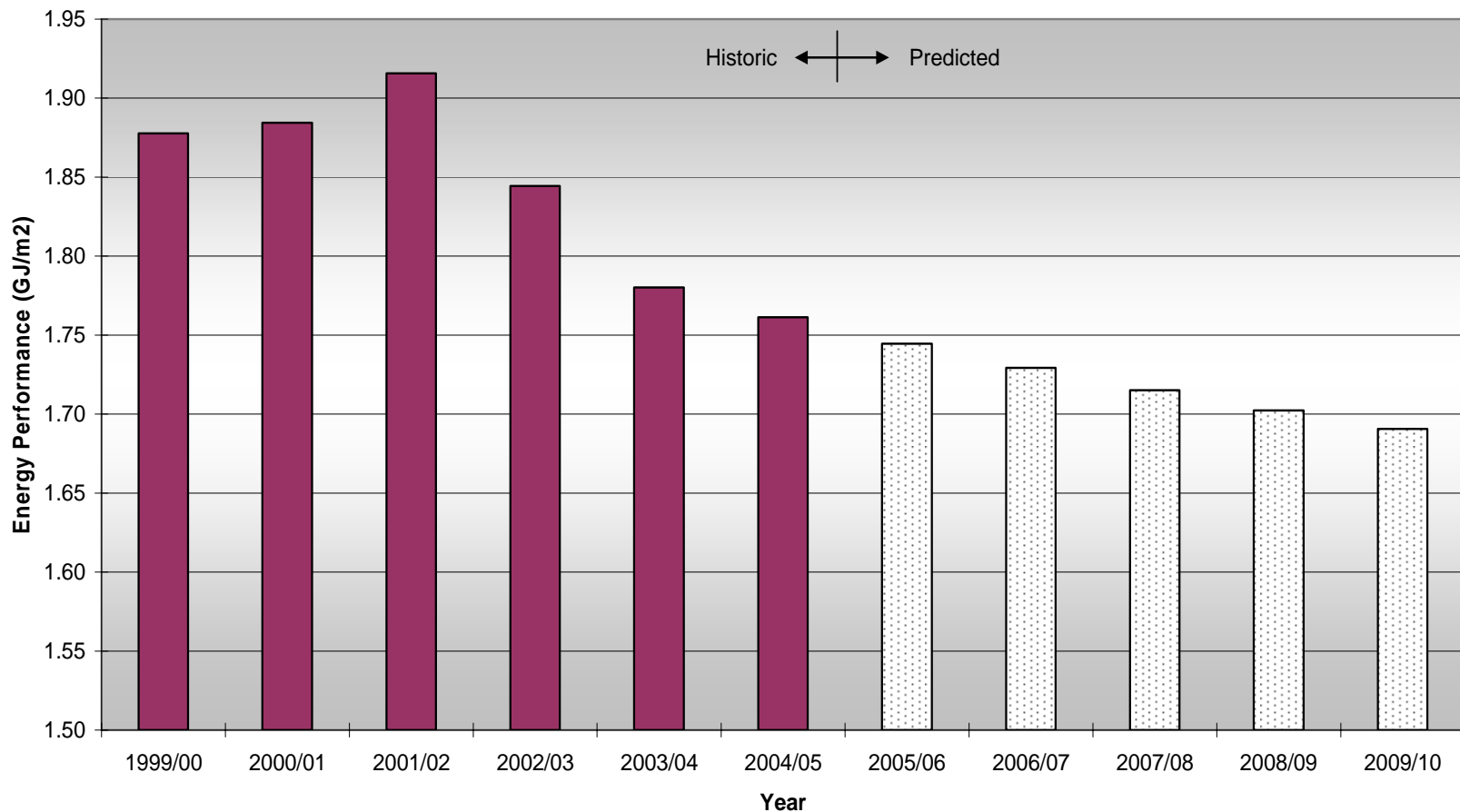
# Trend of total energy and occupied floor area

## Extrapolated Trend for Total Energy Consumed and Occupied Floor Area NHS England



# Trend of energy

**Extrapolated Trend of Total Energy Consumption (GJ/m<sup>2</sup>)  
NHS England**



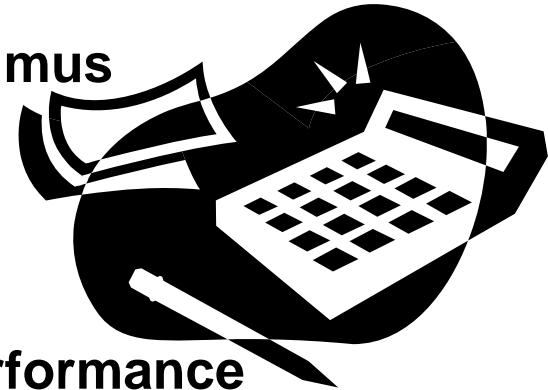
# Key topics

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# Emerging Issues

- **EU Emissions Trading Scheme**
  - 20 MW Thermal Capacity with 3 MW De minimus
  - Using Cap & Trade to reduce Carbon
- **Regulations**
  - Building Regulations 2006
  - Embraces EPBD which includes Energy Performance Certificates for new build, Display Energy Certificates for new & existing buildings, A/C system inspections, boiler efficiencies etc.
- **Carbon Reduction Commitment**
  - Half hourly metered sites with consumption over 6,000 MWh
- **EU Energy Services Directive, 1% per annum to 2017**
  - Measures to improve energy efficiency by procurement
- **Energy White Paper; to achieve a 60% reduction in emissions by 2050 with a series of interim targets**



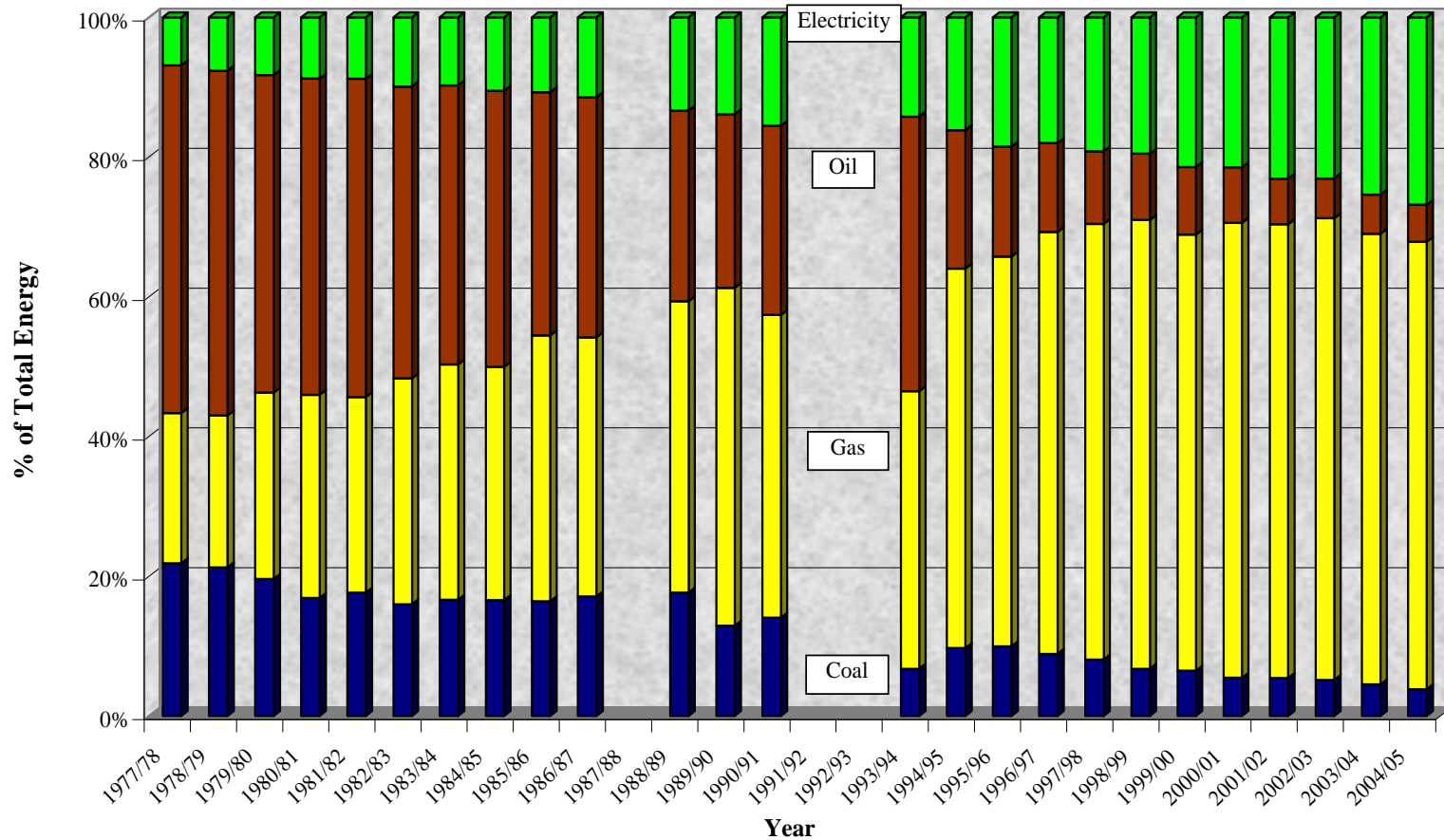
# Key topics

- **Fuel shortages**
- Carbon saving initiatives
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# Trend of intake energy

**Intake Energy Fuel Trend - 1977 to 2005**  
**NHS - England**



# Key topics

## Carbon saving initiatives

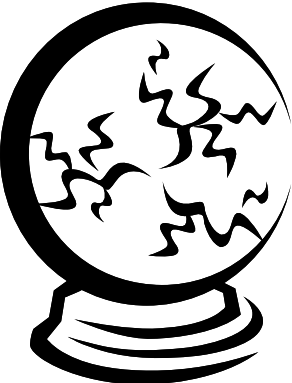
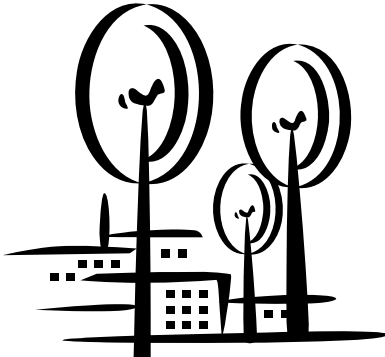
- Environmental concerns
- Investment



Dep't of Health Guidance



*EnCO<sub>2</sub>de*



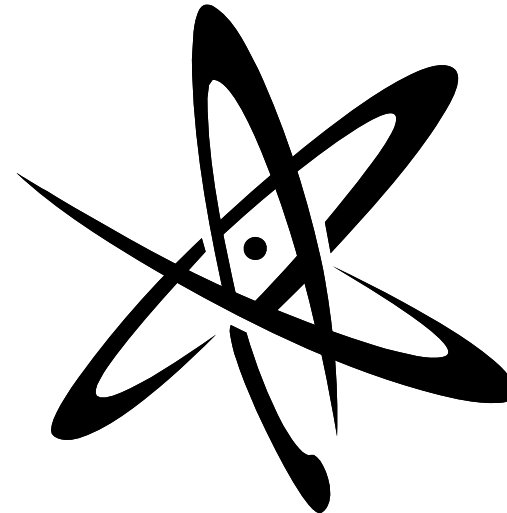
EnCO<sub>2</sub>de

**Saying what it does  
on the cover !**

*work in  
Healthcare”*

**the energy field**

**positive to make a difference**



# Key topics

- **Environmental concerns**
- **Investment**



# Key topics

## ➤ Investment



# Energy Efficiency Sustainability Fund



- **A capital fund made available from 1st January 2007 until 31st March 2009**
- **£100 million to support energy/carbon saving schemes**
- **Centrally managed by DH Estates & Facilities Division**
- **Bids from Foundation Trusts direct to DH EFD**
- **Bids from NHS trusts submitted via the Strategic Estates Advisor of the SHA :**



# Energy Efficiency Sustainability Fund



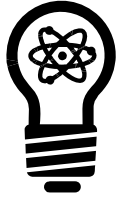
- **Expressions of Interest List – Information Packs**
- **Stage 1 (Initial bid)**
  - Deadline for submissions – open – submissions will be accepted at any time
- **Stage 2 (Capital allocation)**
  - Deadline for submissions – by 31st March 2007 and Quarterly thereafter
- **Stage 3 (completion) – Case Study/Evaluation**
  - Confirmation of scheme completion and financial summary, including actual costs and energy summary including performance details
- **Stage 4 (Post Project Evaluation)**

# Energy Efficiency Sustainability Fund



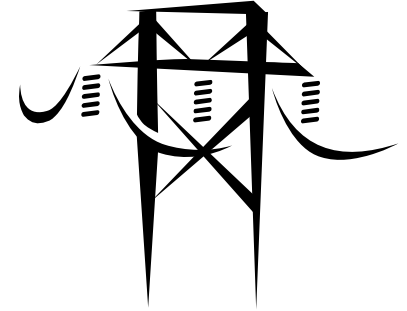
- **At Stage 1 there have been 181 bids of which 102 have been approved to progress to stage 2**
- **If all were completed then investment would be almost £56 million saving 67,500 tonnes CO<sub>2</sub> and over £9.5 million per annum.**
  
- **At this time 27 bids have been approved at stage 2 amounting to over £2.5 million investment but saving £1.3 million per annum**
  
- **Most popular schemes include CHP, boiler economisers, improved controls, lighting etc.**

# Technical Issues



CHP

Heat recovery



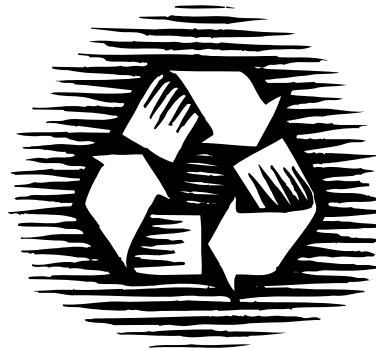
Sterilizing and disinfection

Lighting

Heat emitters

Cooling

Energy supplies



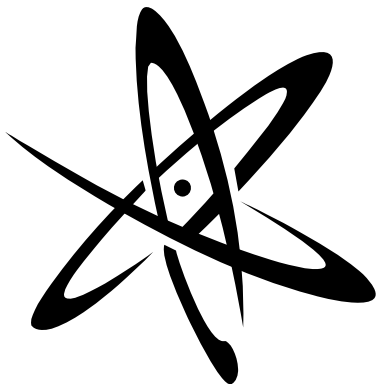
Electrical power

Water heating

Distribution systems

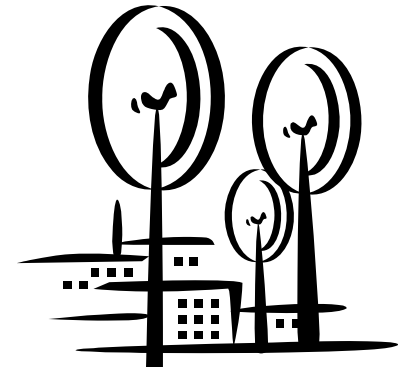
Equipment

Ventilation



Boiler selection

BMS

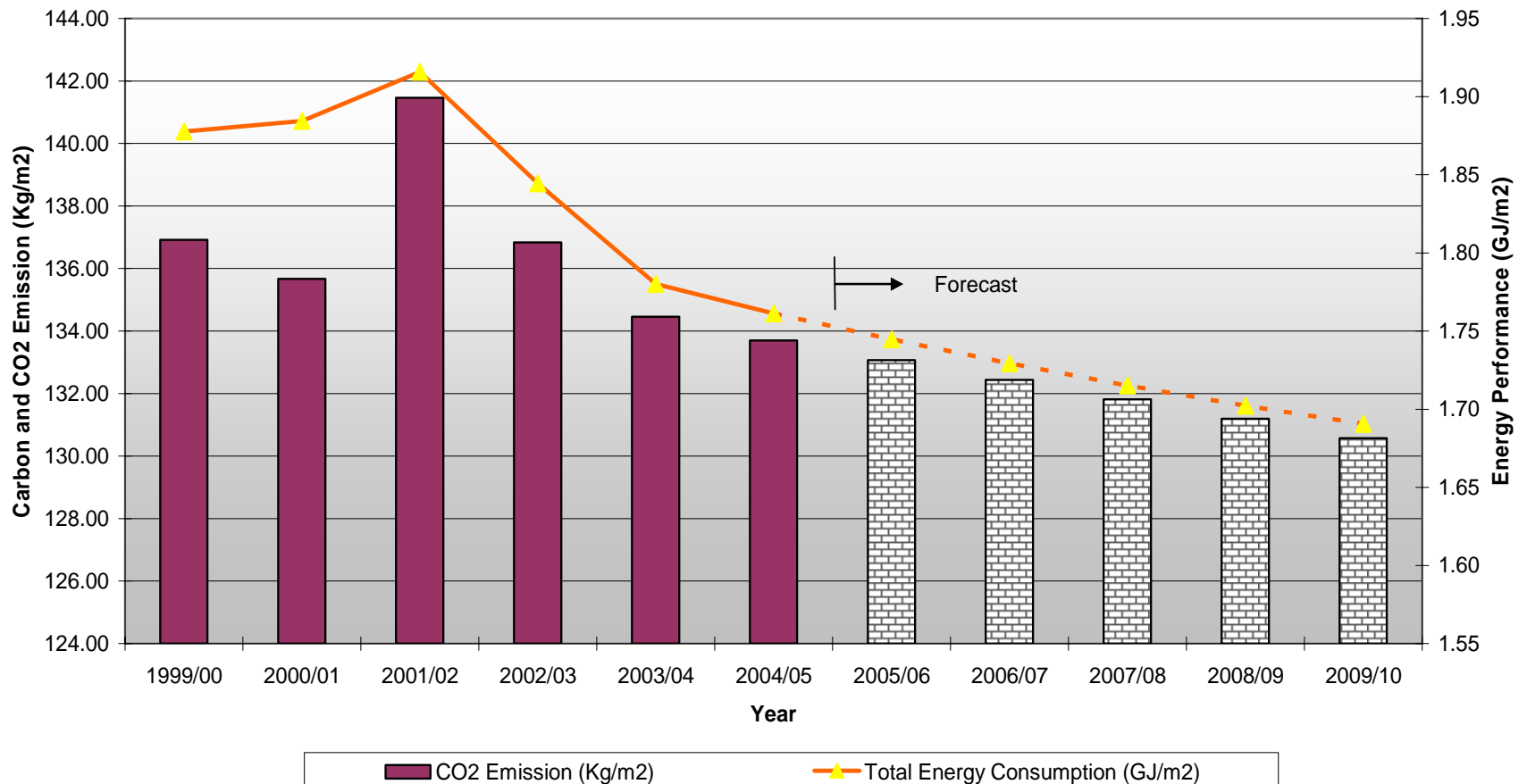


Catering

- **There are other opportunities out there for support funding**
- **DTI renewable energy grants (up to 50%) supporting microgeneration such as solar, wind, biomass and heat pumps.**
- **Salix, a Carbon Trust supported finance partnering initiative. (50% of an agreed programme)**
- **Commercial partnering, for example, CHP with installation and operational deals**
- **Trust capital and revenue solutions.**

# Trend of CO<sub>2</sub>

**Trend of CO<sub>2</sub> Emission Performance (Kg/m<sup>2</sup>)  
Compared with Energy Performance (GJ/m<sup>2</sup>)  
1999/00 - 2009/2010  
NHS-England**



# Conclusion

**From predictions it is expected that:**

- By 2010 energy performance will have improved by approximately 10% from its 2000 value, reducing to 1.69 GJ/m<sup>2</sup>**
- Energy performance is improving at an average rate of 1.2% per year and energy consumption per sq m of occupied floor area has fallen by 6.2% from 1.88 GJ/m<sup>2</sup> in 2000 to 1.76 GJ/m<sup>2</sup> in 2005**
- Electricity consumption is increasing at a rate of 3% per year**

Any Questions ?

Chris Holme, Principal Engineer

End of presentation



**Thank you**