

The UK has committed to reduce its greenhouse gas emissions by 80% by 2050 from a baseline of 1990.

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How Sustainable Development is Helping Support and Advice Renewables and Utilities

Water Projects, the numbers
£0.41 per m³ in 1990 to £2.50 per m³ in 2011

What SD are doing to help

Maximising
Efficiencies

Support 2011/12

- (1) Resource Efficiency Audit
- (2) Energy Efficiency Survey
- (3) Implementation Support
- (4) Energy Efficiency Loan Scheme
- (5) Industrial Symbiosis

Renewables

Maximising
Efficiencies

Biomass Boilers:
Simple pay back
4 to 5 years



Solar Thermal
Simple pay back
4 and 10 years.

Wind Turbines:
Simple pay back
4 and 10 years.



Solar PV:

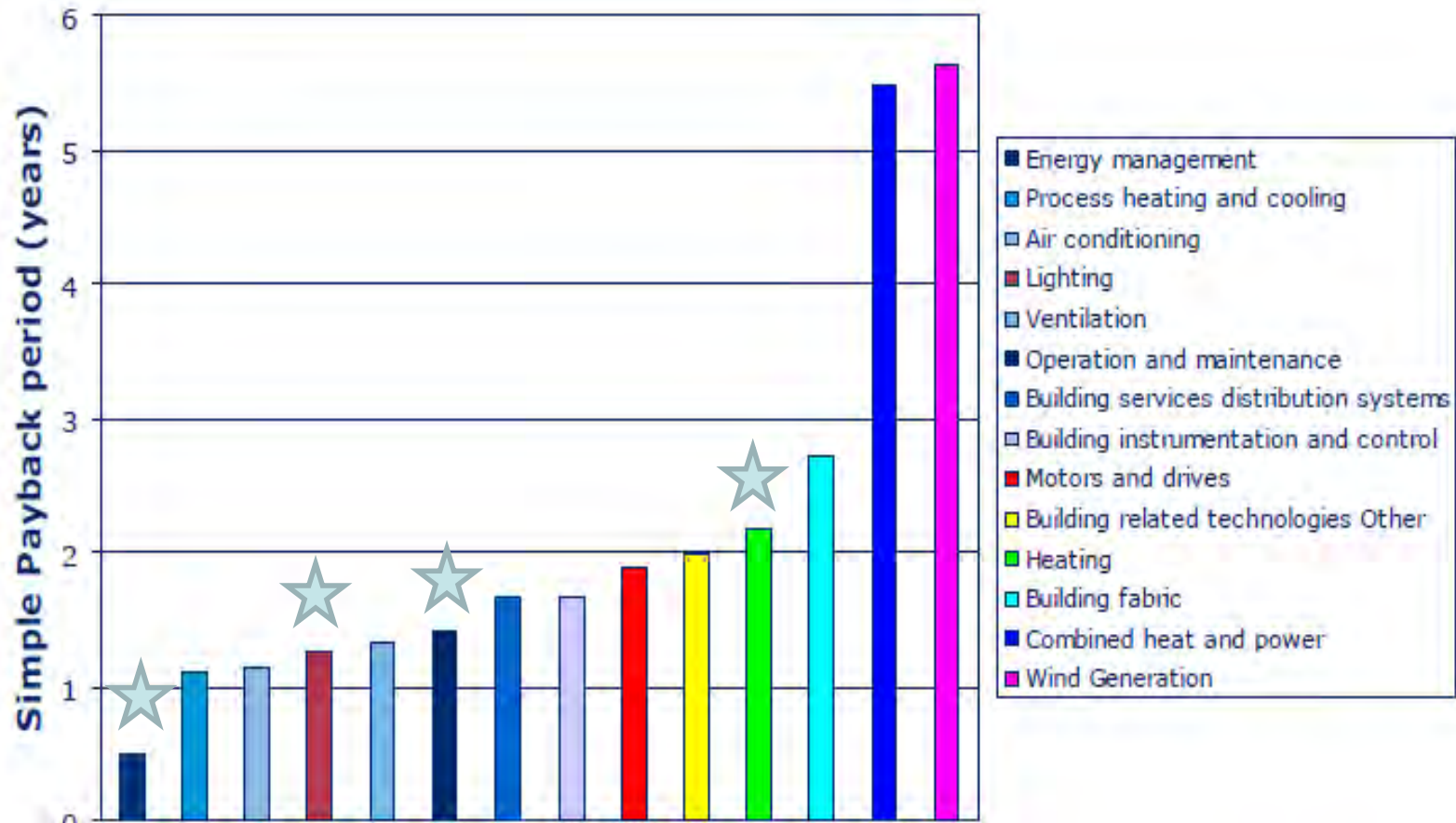
Simple pay back
10 and 20 years

Hospitality Sector: The Main Issues

- Higher use, Electricity, Gas, Oil and now water
- Rising energy spend, up +16% this year alone
- Easy to control, but need to be controlled
- Water is now a Big Issue form £0.95/m³ to £2.50m³ in three years
- Waste has also become important
- Lots of options to save

Things that pay back

Maximising Efficiencies



Sustainable Development

**Maximising
Efficiencies**

What have they in common?

Boreholes

Urinal controls

Fish

Pool Covers

Boreholes

Water Abstraction Borewell

| Demand (m ³ per year) | Capital Cost | Annual Savings | Payback (years) |
|-------------------------------------|-----------------|-------------------|--------------------|
| 28,000 | £70,000 | 26,600 | 2.6 |
| Today @ £1.10 M3 | | 30,800 | +16% |

Urinal controls

Office toilet

| Litres/ Flush | Rate / hour | Hr /day | Days per year | 168hr/week Total |
|------------------|----------------|---------|------------------|----------------------------------|
| 5 | 4 | 24 | 365 | 175,200 L/ year 175.2 M3 year |
| Cost | @ £2.50/M3 | | | £ 438 Cost /year |

Reduce this to 40/hr week
Saving

£ 104.29
£ 333.71

Capital cost Less than £200 SPB Less than 9 Months

Defrosting Fish

Kitchen Hot Tap running for one hour at 8L min

8 l/min 480 L/hr **£ 1.20** water cost

Cost to heat water **£ 4.46** Heating cost

Hours per Day 1.00 **£ 5.66** Total

Cost per year 365 Days **£ 2,065.41** Electric

£ 1,147 .45 Oil

Pool Covers

| Evaluation | Predicted | Post Project |
|-------------------------|---------------|---------------|
| Natural Gas Savings | 604 MWh | 661 MWh |
| Heavy Fuel Oil Savings | 126 MWh | 139 MWh |
| CO ² Savings | 205 tonnes/yr | 218 tonnes/yr |
| Capital Cost | £22,000 | £22,200 |
| Savings | £7,300 | £10,090 |
| Payback Period | 3.0 yrs | 2.2 yrs |
| Water saving | 300 M3 | £ 700/ year |

Sustainable Development

**Maximising
Efficiencies**

More Information Contact

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