

Energy & Carbon Efficiency in Real Estate

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Financing Carbon Reductions

Age-old problem of Landlord and Tenant

The landlord pays, the tenant benefits

No indication in the UK commercial property market that greener, more energy-efficient buildings attract higher rents or asset values






LS and Sustainability

- We set ambitious targets for new developments:-
 - 15% better than Part L in terms of CO₂
 - Very Good BREEAM with aspiration for Excellent
 - 20% recycled content
 - FSC Project Certification
 - 10% waste to landfill
 - Measure embodied carbon

Plus: a target to reduce average emissions from managed premises by 30% by 2020





Operating Buildings

98% of buildings already exist

- 50% of global energy usage
- 40% of UK CO₂ emissions
- 18% of UK CO₂ emissions from commercial buildings

70% of the 2050 UK building stock has already been built





2004 Case Study

- Regis House
- 85,000 sqft air-conditioned offices
- Zero expenditure
- 29% reductions in CO₂
- £10/sqm at today's prices

All about changing behaviours





2010/11 Case Studies

- 1/. Modern a/c property - 6% savings
- 2/. Modern a/c property - 9% savings
- 3/. 1960s centrally-heated offices – no progress, lack of sub-meters





The Rules of Engagement

- MEMORANDUM OF UNDERSTANDING
- MOU is voluntary
- Needs extensive buy-in
- Mutually agreed objectives and targets
- Zero-cost measures
- Accurate & timely reporting
- Profile, enthusiasm, pro-active partnering





Examples

Occupier Commitment

- Relaxed set-points
- Improved communication
- “Switch-off” policies
- Internal awareness
- Change to more efficient equipment

Landlord Commitment

- Free training
- Awareness materials
- Energy audits
- Timely reporting, sharing of data
- Newsletters

Priority issues are addressed in a building-specific
Environmental Management Plan





How to Move Forward

- We need workable Spend to Save mechanisms, overcoming the barriers:-
 - Agree the baselines
 - Agree how savings will be shared
 - Agree rules on effects of third-party actions





Barriers

- Even with this spirit of cooperation, funding is an issue
- Resistance to increases in service charges
- Zero-cost initiatives will only take us so far
- Landlords are treated with suspicion
- “Spend to save” is hard to push through





A Few Observations

- Owner spends capital but occupier benefits on running costs
- Greener buildings need to have associated rewards
 - Increased rents
 - Greater asset values
 - Reduced stamp duty
 - Rates rebates






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The Government's Green Deal doesn't address these factors and is not financially attractive to major landlords





A Few Examples

- Voltage Optimisation
- Installed on 2 of 4 risers
- Cost, a little over £30k
- Savings 9% and 13%
- Payback 5 to 7 years





Example 2

- New lifts
 - VSD drives, regenerative braking
- 75 less energy usage
- Payback – not relevant

- Only an option on refurbishment





Example 3

- 1°C change in temperature set-points
- Cost – nothing
- Results – 7 to 10 savings in heating & cooling energy





Example 4

- Real-time data monitoring
- Retro-fit of data loggers to all sub-meters
- Web-enabled
- All occupiers can go to a web-site to see their own half-hourly data in real time (day +1 reports)
- Service charge item





Renewables

- Ground-source with heat pumps
- Very effective, but expensive. New-build only ?
- Solar PV
- Expensive, long pay-backs even with FITs, small overall contribution
- Solar water-heating
- Simple, cost-effective but usually as a new-build or major refurb item
- Wind
- Ha !





What Next ?

- DECs – Display Energy Certificates
 - To be introduced in 2012, at occupancy level ?
(If BIS agree !)
- CRC – Carbon Reduction Commitment
 - Tax, Trading Scheme ?
 - Recovery from tenants ?
 - Linked to DECs ?
- Mandatory corporate reporting
- Illegal to let EPC F & G rated buildings from 2018

