

**Energy Performance Contracting
for UK Public Sector buildings
HEAT10 Conference Cambridge
2 December 2010
<http://www.cir-strategy.com/events>**

Agenda



- Role of RBS
- Market Developments
- The Building Emissions Challenge
- The Solution – Energy Efficiency Retrofits
- Financing Options
- What else are we doing?

The role of RBS

■ Where did it start?

- ◆ The Clinton Climate Initiative – London becomes the 1st of the C40
- ◆ RBS works with the C40 Cities group
- ◆ RBS agrees to arrange financing of up to \$1bn for environmental projects.



■ Plays to an existing strength

- ◆ Banker's to circa 50% of the Local Authority market
- ◆ Detailed understanding of public finance and accounting practices
- ◆ Unrivalled expertise in environmental finance -
- ◆ Holistic approach to managing our client's risks and opportunities relating to environmental issues.
- ◆ Close banking relationship with many of the key ESCO's

Market Developments

■ Carbon Reduction Commitment

- CRC brings Cap & trade to the UK creating a price for the carbon emitted by 5000 corporate and public sector organisations
- Compliance - Is your electricity spend over £500k?
- Reputation - Where will you be on the league table?

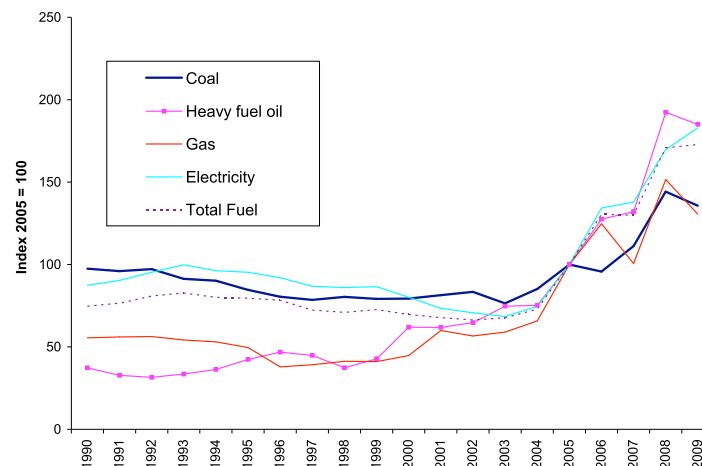
■ Energy Performance of Buildings Directive

■ Energy prices

- now be one of the major costs for many organisations
- Political instability, reducing natural resources & post recession growth all point to energy prices rising
- CSR & carbon reduction among the top priorities for organisations



Industrial Fuel Price Indices in Current Terms 1990 - 2009

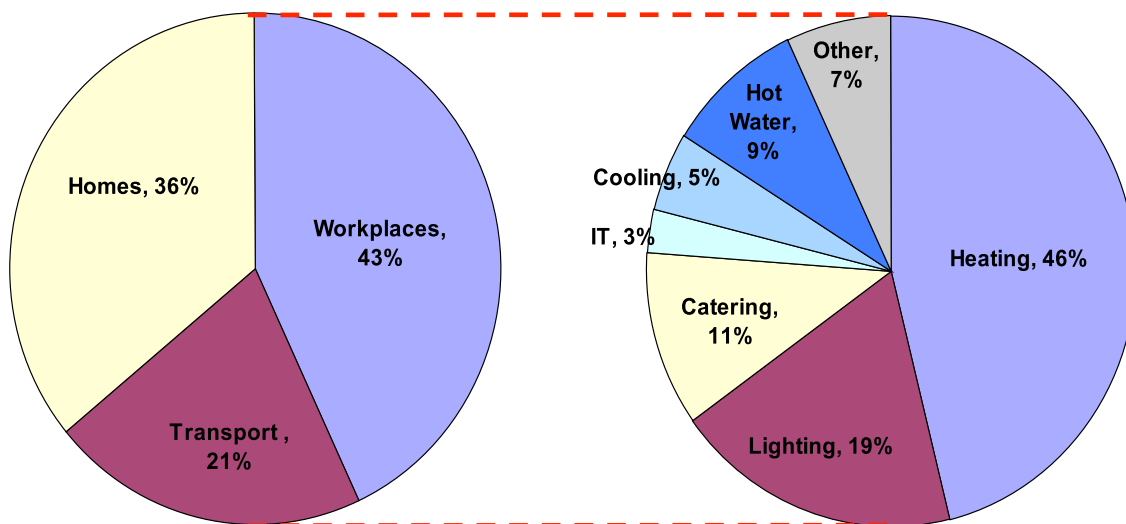


The Building Emissions Challenge



- Europe's buildings waste €270 billion every year
- Buildings account for 40% of CO₂ emissions

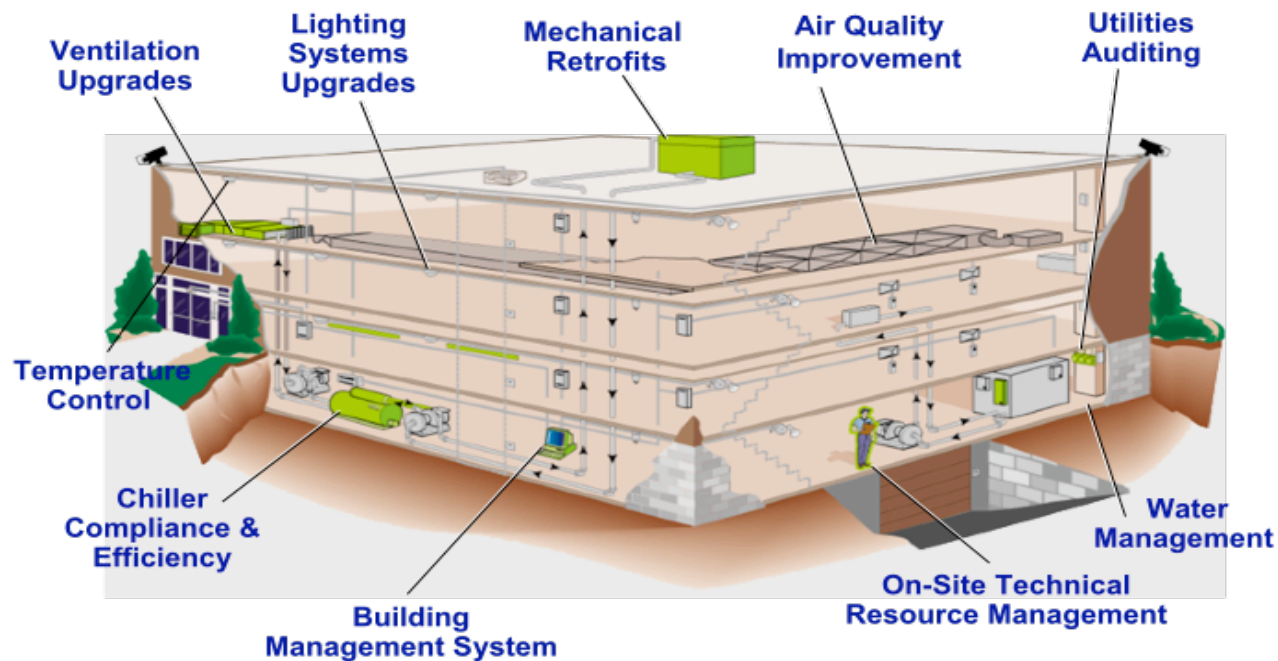
43% of London's total Carbon emissions come from Commercial and Public sector buildings



- 80% of the buildings we will occupy in 2050 are standing today

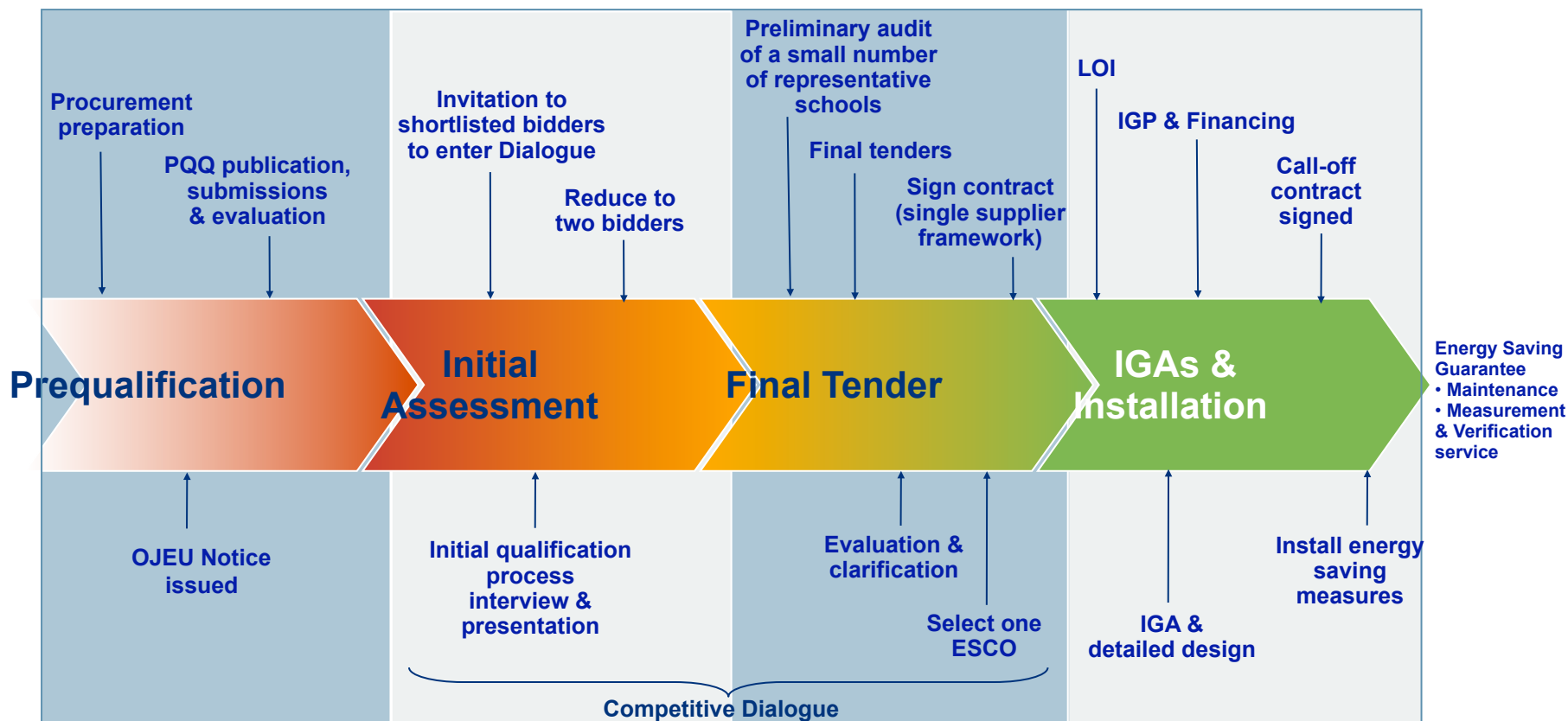
A Solution – Building Energy Efficiency Retrofit

- *A building retrofit is...*
 - A programme of energy efficiency improvement measures.
 - A building, site or portfolio approach to energy efficiency measures.
 - Flexible long term contract guaranteeing energy savings & carbon reduction.



The ESCO Solution

A compliant procurement process



EPC Case Study – Transport for London



The challenge

- 25% energy reduction target
- Building mix
- Capital funding issues

Esco's solution (Phase 1, May'09)

- £4 Million project
 - ◆ Lighting Replacement and Controls
 - ◆ Upgraded Building Energy Management Controls
 - ◆ Control of PC's during night time and in stand-by
 - ◆ Building Fabric Improvements
 - ◆ CHP Plant
 - ◆ Solar Thermal Hot Water System

The Benefits

- 25% electrical and 20% gas reduction
- Guaranteed energy savings of circa £750k pa
- CO₂ reduction of 3,648 tonnes pa

EPC Case Study – Gwent Healthcare Trust



The Trust

- 3 Acute hospitals & 20 community hospitals
- Royal Gwent Hospital: > 800 beds, 15 operating theatres
- £5.9m annual utility bill - 3rd highest spend item after staff & drugs

Esco's solution

- £6.5 Million project
 - ◆ 9000 energy efficient lamps
 - ◆ 5 x steam boilers incl waste heat boiler
 - ◆ CHP & Absorption Chiller
 - ◆ 2 x 600kw standby generators
 - ◆ Complete BMS system upgrade
 - ◆ Water conservation measures
 - ◆ Pipes, valves & insulation upgrade

Gwent Healthcare
NHS Trust



The Benefits

- Guaranteed savings of £1,137,600 pa
- CO₂ reduction of 54,000 tonnes

London – case study Framework agreement

- London committed to Clinton Climate Initiative as a C40 City
- Building Energy Efficiency Programme (BEEP – now Re:fit)
 - 42 buildings in pilot (TfL, Police & Fire Service)
 - Further 58 buildings in first stage
 - Process proved
- GLA announced commitment to cut energy use by 25% in PS buildings using this model
- Move to 4 yr (3+1) Framework Agreement
 - LDA on behalf of GLA (Oct 12'09 award date)
- *“will be made available to Public Sector in London as well as the rest of the UK”*
- DOE based contract vehicle to provide pre-qualified ESCOs for EPCs on public buildings
 - Access external financing
 - Guaranteed energy savings pay for capital investment



LONDON

UK-London: energy-efficiency consultancy services

2009/S 87-125880

CONTRACT NOTICE

Services

Financing – the standard choices

How do you fund Energy Performance Contracts?

- Options:
 - PWLB
 - Self funding / Cash Reserves
 - Bank Loan / Asset Finance

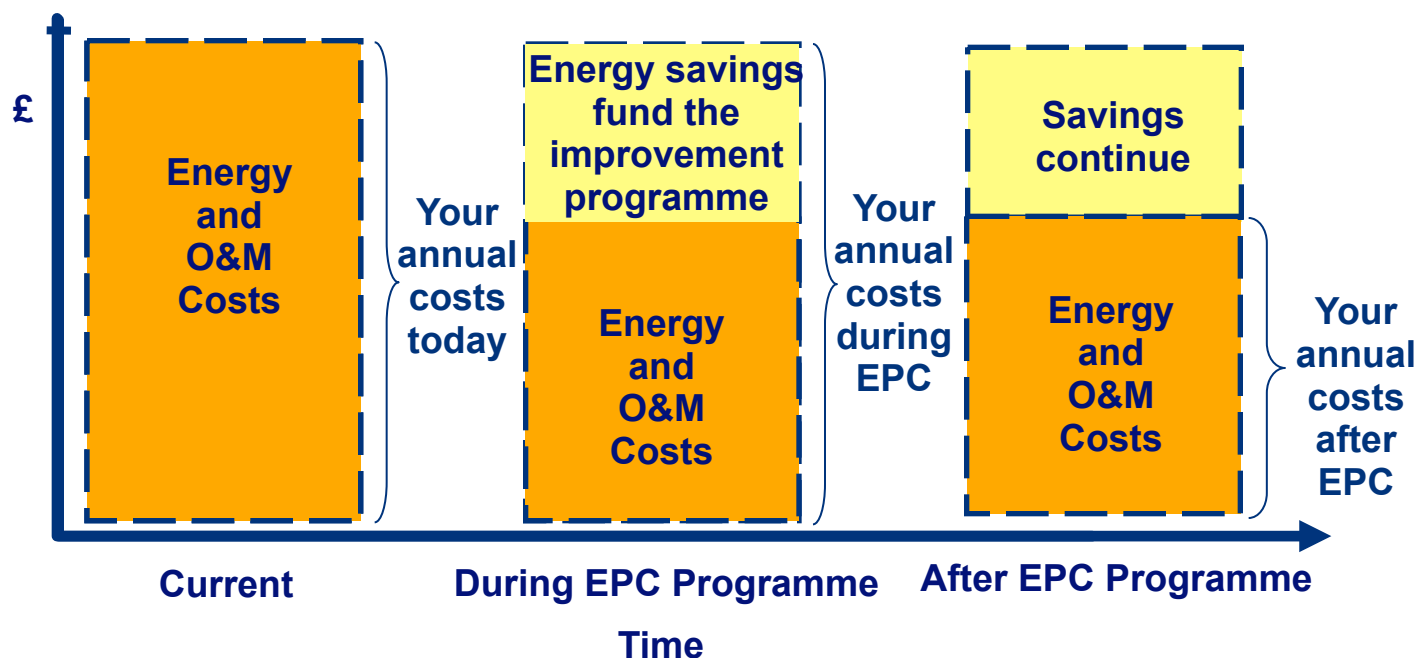
None of these are ideal

- Still require capital expenditure and have a balance sheet impact.
- Difficult to prove the measures pay for themselves
- Despite the guarantee, project risk sits with the Local Authority



Financing – the alternative option

- Future guaranteed energy savings finance improvements today
- No upfront investment or capital expenditure – a true self – financing option
- No additional revenue expense
- Risk transfer - ESCO and Finance partner takes the performance obligation and finance risk.



What else can we do?

- Tri-Generation (CHP & Absorption Cooling)
- Solar (Heating & Photovoltaic)
- Small Scale Wind Turbine
- Rainwater Harvesting
- Green Roofs
- LED lighting
- Biomass
- Ground Source Heat Pumps
- River Water Cooling
- Landfill Gas Utilisation
- Chilled water / Ice storage
- Anaerobic digesters



Recap

- Role of RBS
- Market Developments
- The Building Emissions Challenge
- One Solution – Energy Performance Contracts
- Financing Options
- RBS pilot schemes



Thank You

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