European Energy Service Day
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Energy Services: Potentials and Future Applications
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Agenda

- Who is eu.ESCO?
- The challenge we face
- What is Energy Performance Contracting?
- Overcoming barriers to growth
- Who is benefiting from Energy Performance Contracting?
About eu.ESCO

- **eu.ESCO** is the European Association of Energy Services Companies (ESCOs).

- It was founded in 2009 by **eu.bac**, the European Building Automation and Controls Association.

- **eu.ESCO**’s objective is to accelerate the adoption of Energy Performance Contracting (EPC) in Europe to help the European Member States achieve their energy efficiency targets.

- More details at [www.eu-ESCO.org](http://www.eu-ESCO.org)
The challenge ahead

- Unprecedented financial turmoil
- Government debt levels increasing
- Energy demand & prices increasing
- Energy security issues increasing
- Carbon emissions increasing
- Climate change effects worsening
- European Legislation compliance increasing
The energy we waste in our buildings

- Buildings account for 40% of CO₂ emissions
- In Europe we waste 20% of the energy we consume
- Europe’s buildings waste €270 billion every year
- Will increase 53% by 2030
- 80% of the buildings we will occupy in 2050 are standing today
The challenge - 9% energy savings by 2016
80% carbon emissions reduction by 2050

One in Four of 3200 Public Sector Buildings assessed scored F or G
Where should you focus?

£1 spent on more efficient energy use avoids £2 in investment in energy supply

Source: IEA

Supply Side

Demand Side

The greenest energy is the energy that isn’t generated
What is an Energy Performance Contract?

A partnership between a customer and an energy services company (ESCO) that allows the customer to improve the demand-side energy efficiency of their facilities without any up-front capital costs or special loans.

Using wasted energy to fund risk-free carbon and energy reduction.
What An Energy Performance Contract enables you to...

- Upgrade your buildings with modern, energy efficient equipment… with no impact on current operational budgets
- Reduce building energy consumption typically by over 20% … without additional investment
- Meet your carbon emissions targets… at no additional cost
- Make major improvements… without the need for up front capital

The EPC programme money is already in your budget, currently paying for wasted energy
Why use EPC?

- Completely self funding
- Guarantee transfers financial and equipment performance risk to the ESCO – if the savings target isn’t made, the ESCO pays the difference
- Immediate improvements are made
  - Buildings upgraded with modern, reliable energy efficient equipment
  - Comfort conditions are improved for occupants
  - Carbon reduction
  - Improvement path for CRC benefits
- No need for additional personnel
- Creates job opportunities
- Proven process
EPC – How the funding works

Current

Energy and O&M Costs

Your annual costs today

During EPC Programme

Energy savings fund the improvement programme

Energy and O&M Costs

Your annual costs during EPC

After EPC Programme

Savings continue

Energy and O&M Costs

Your annual costs after EPC

£
EPC is a 4 stage process

- Preliminary study
  - Preliminary audit
- Detailed analysis
  - Detailed engineering design
- Implementation
  - Planning, installation, project management
- Guarantee phase
  - Changes in energy use accounting
  - Energy Saving Guarantee measurement & verification service (IPMVP)
A total facility approach

A programme approach accessing over 250 energy conservation measures
So, what’s the hold up in Europe?

  - More than $1.9 billion has been invested in over 400 EPC programmes
  - Over 30,000 new jobs created

- Lack of awareness
- Energy efficiency – the invisible solution
- Focus on supply side
- Procurement difficulties
- Selective financing
- Lack of policy push and incentives
- No binding targets
- Reliance on government funding
- Accounting & budgetary rules
- Discouraging investment taxation rules
- Few ESCOs able to offer EPC

Energy efficiency is the unseen elephant in the room
Procuring an EPC requires a different approach

- The traditional, price driven tender approach does **not** work when procuring an EPC
- Selection is driven by **energy savings** not price
- **Prequalification** of the right EPC supplier is the key step
  - expertise, experience, financial strength, resources, people, references, innovation…

**You are buying energy savings – not equipment**
The good news is…

An effective, compliant procurement process exists!

Funding is not a barrier!
Who is benefiting from EPC?

The customer
- Transport for London (Clinton Climate Initiative)

The challenge
- 25% Carbon reduction target
- Building mix
- Capital funding issues

Solution (Phase 1, May’09)
- Initial 22 buildings
- £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 £769,128 pa
- CO₂ reduction of 3,648 tonnes pa
Thank you

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