

European Energy Service Day

Sept 13th, 2010

Brussels

eu. bac



european
association
of energy
service
companies



Energy Services: Potentials and Future Applications

Gunnar Liehr

25.02.2011



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

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

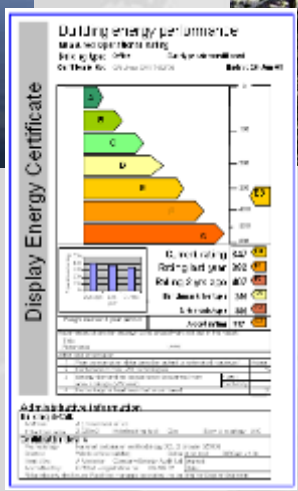


The energy we waste in our buildings



- 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



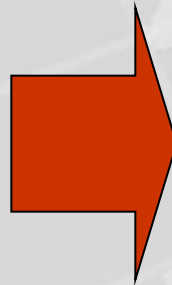
One in Four of 3200 Public Sector Buildings assessed scored F or G

Where should you focus?

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

Source: IEA

Supply Side

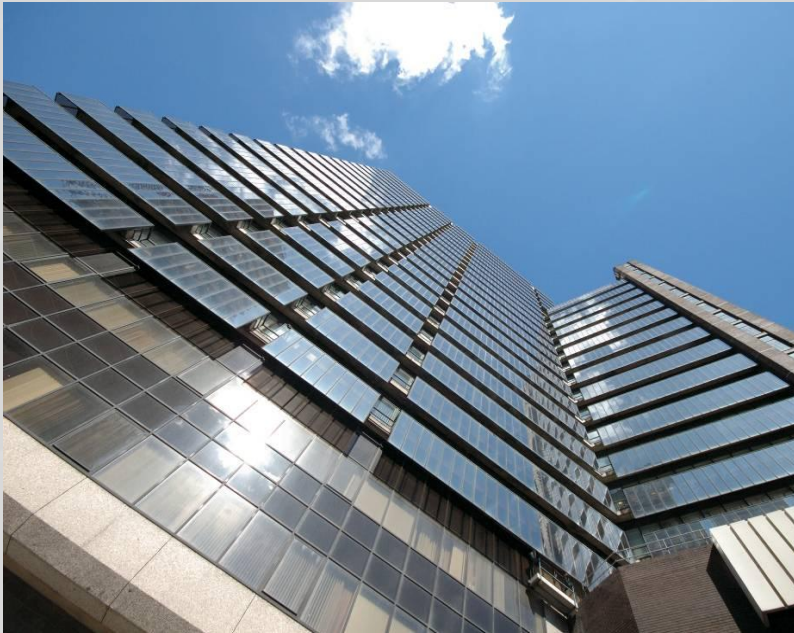


Demand Side



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**



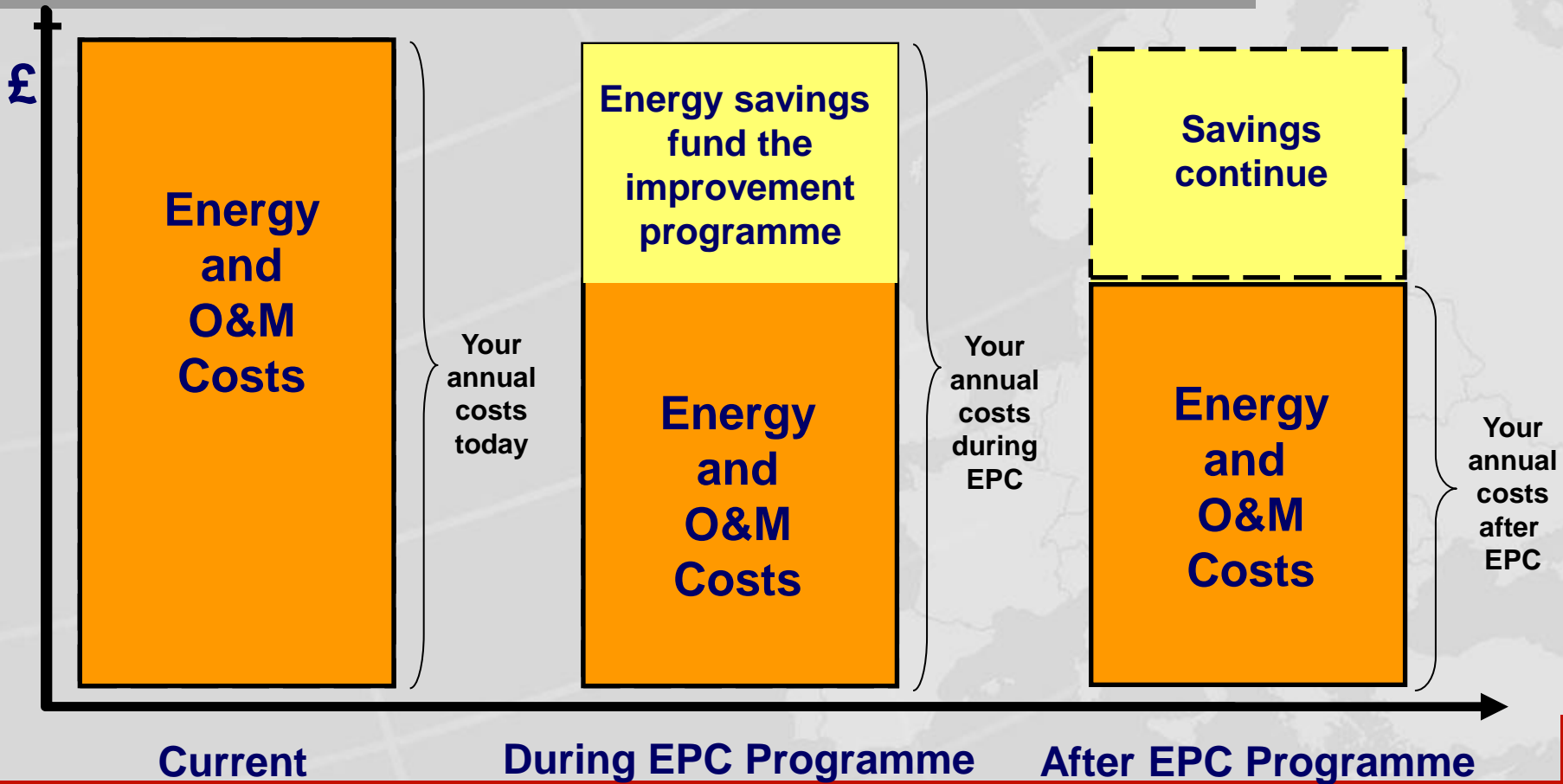
The EPC programme money is already in your budget, currently paying for wasted energy

Why use EPC?

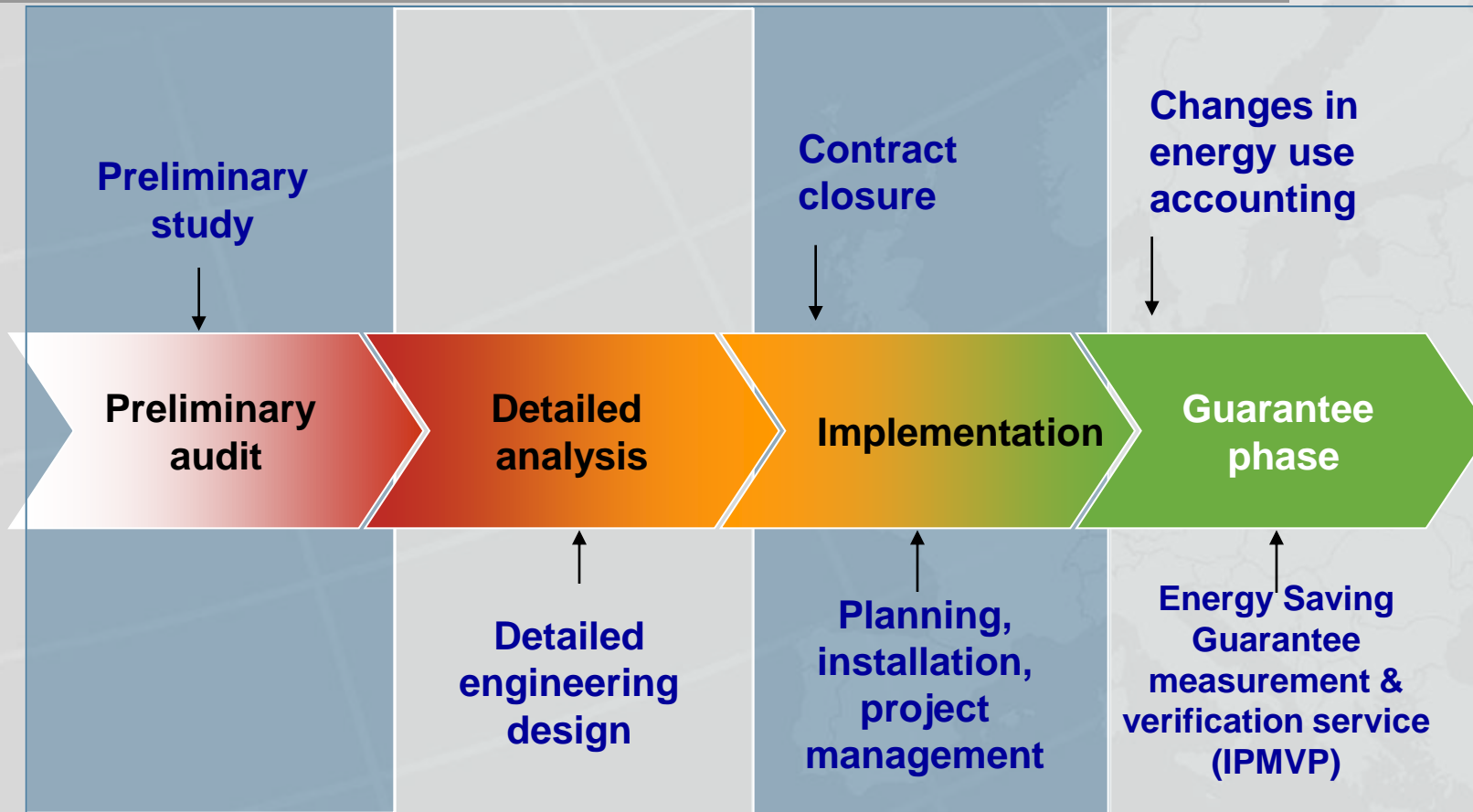


- Completely self funding
- Guarantee transfers financial and equipment performance risk to the ESCO – if the savings target isn't made, the ESCO pays the difference
- Immediate improvements are made
 - Buildings upgraded with modern, reliable energy efficient equipment
 - Comfort conditions are improved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

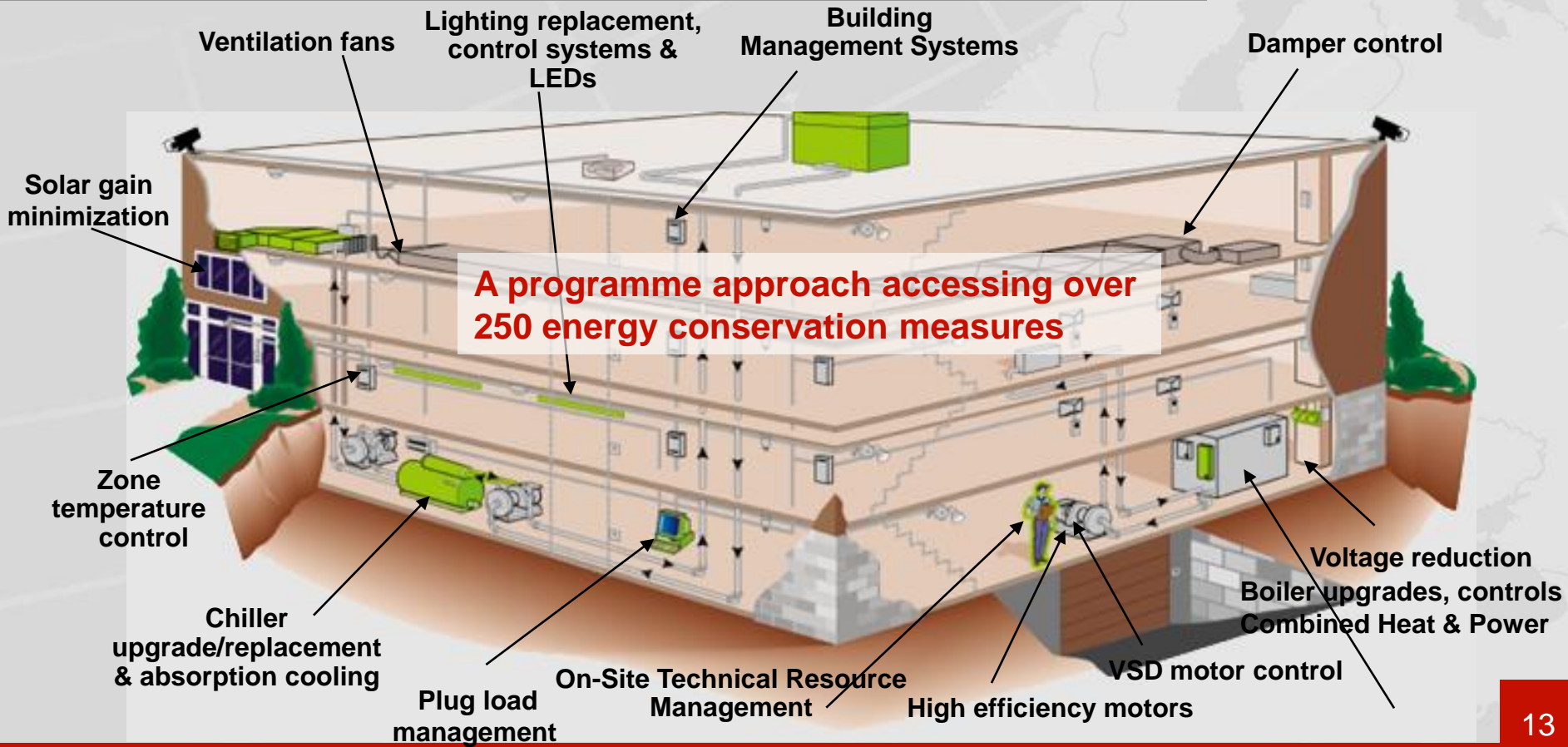
EPC – How the funding works



EPC is a 4 stage process



A total facility approach



So, what's the hold up in Europe?



**Energy efficiency is the
unseen elephant in the room**

- **US Energy Policy Act 2005**
 - 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

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



gunnar.liehr@siemens.com

www.eu-esco.org